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ABSTRACTS OF MASTERS' THESES

TOWARD GRAMMATICAL ADEQUACY

JAY L. CURTIS

Current linguistic theory, developing since the most explicit formulation of it a decade ago (Chomsky, 1957) into a system that has largely superseded Bloomfieldian structuralism, holds that for any natural language L there may be elicited a potentially infinite set of structured segments SS,[1] each of which consists of a finite set of morphemes systematically arranged by psycho-physical processes in speakers of L in conformity with an internal code and is subject to description by an adequate transformational generative grammar.[2] An adequate grammar, however, is more than a descriptive device, more than a stamping instrument to signify approval of SS acceptable to the code, and more than a monitoring system to detect SS rejected by the code. In addition, generative theory requires (Bach, 1964, p. 10) that the grammatical process operate with maximum formality, explicitness, simplicity, and completeness. We shall examine the possibility of providing these qualities in grammars devised under the theory. At the present time, such a grammar does not exist.

Certainly, an adequate new grammar of L, based largely upon continuing developments of twentieth-century linguistic science and controlled as rigorously as investigative procedures in any of the exact sciences, will differ in many important

[1]By *structured segments* we mean those organized concatenations of morphemes that stimulate in normal speakers of a natural language reactions ordinarily evoked by declarations, directives, questions, exclamations of warning, etc. At times, the term *sequence* has been used, especially when it refers to a sublexical form of a derivation. We have not often used the term *sentence* because of the faulty intensional definitions of traditional grammar and the unsatisfactory definitions of the "structuralists" of the 1940's and '50's.

[2]The assumption in this paper, supported by substantial evidence, is that the transformational generative theory is dominant, at least in America, although the school of tagmemics, espoused largely by the Summer Institute of Linguistics, has counted among its adherents linguists of note, among them the phonetician Kenneth Pike and the morphologist Eugene Nida. Incidentally and surprisingly, Nida's *A Synopsis of English Syntax*, written in 1943 as a doctoral dissertation in constituent analysis, has just been published with little revision in the meantime ('s-Gravenhage, 1966). The publication was the result of a "consistent demand for copies of this dissertation." It has no relation to generative theory.

respects from the great authoritarian grammars of tradition: the Sanscrit of Panini; the Greek of Dionysius Thrax; the Latin of Donatus or Priscian; or the English of Priestly or Murray and their nineteenth- and twentieth-century disciples.

The adequate new grammar will explain in terms precisely applicable to the internal discipline of L just what that discipline is and how it operates. Such a grammar will be capable of analyzing the process whereby nonverbal segments of language are organized from social experience, stored as symbols in the preconscious region of speakers of L in a manner as yet unknown to science, and then evoked by appropriate stimuli as uniquely new verbalized SS. The adequate new grammar will provide a means of exploring the sublexical or deep structure of every S and explain the cybernetics of acceptance or rejection of SS by speakers of L.

The linguistic theory from which the new grammar may develop will doubtless discover categories and relationships as remote from contemporary theory as the concept of binary constituents before 1933 or transformationalism before 1957. But until these new categories and relationships emerge as linguistic research continues, it is not at all certain that the theory now dominant, which presupposes a definitive grammar of rules, will survive as an impregnable support for an adequate grammar. In fact, argument to the contrary is substantial.

It now seems certain that whatever categories eventually prove applicable — whether old, new, or yet to be discovered — will have to be susceptible to "mechanization" as input for a simple operator maximally automatic and capable of enumerating or generating ("churning out") an indefinite set of unique grammatical SS if an adequate grammar is to be developed along the lines of the basic principles in current generative theory. Since no one claims that an ideal grammar of rules — a successful grammar in the Chomskyan sense — has yet become a practical development, the demands upon generative theory seem formidable, those of Bach (1964, p. 186), for instance:

> A grammar must be a predictive theory which will project the unlimited number of new sentences not in the original corpus. This view brings with it two corollaries.

> General linguistic theory must provide a precise characterization of the way in which the theory is said to "predict" a given sentence. There must be some recursive device or rule in a grammatical description. Further, a grammar must assign a structural description to each sentence it enumerates. Again, the way in which this assignment takes place must be precisely specified by the general theory.

Chomsky's now famous definition of a grammar as "a device that generates all of the grammatical sequences of [a language] and none of the ungrammatical ones" is perhaps the most productive statement in a decade of active linguistic investigation, even with the apparent circularity created by the undefined cognate terms in the differentia,[3] because from the definition emerges the key word in the theory. This word, "generates," suggests that grammar, like language itself, is an organizing operation rather than a fixed and closed system devised as a custodian of language purity. As we have said, no ideal generative grammar of English has yet been written just as no traditional state-description of English has ever been definitive no matter how multi-volumed the works came to be (witness Kruisinga, Poutsma, Jespersen, and others). In truth, the very fact that a fluent speaker of L, even a small child, can utter and constantly does utter new SS never before spoken but completely grammatical suggests that linguistic science may have to rely upon the developing allied disciplines of psycholinguistics and linguistic anthropology for the guidelines of an ideal theory of grammar, which, no doubt, will eventually be written as an exposition of an internal system no less complicated than thought itself.

In the decade following the publication of *Syntactic Structures,* which is a deceptively innocent-looking little book of 114 paperbound pages of revolutionary linguistic theory outlined with some rigor in the language of technology — that is, English

[3]Chomsky's discussion of "grammaticality" (1957, pp. 13 ff.) partially relieves his definition of circularity by posing authority as recourse for determining acceptance or rejection, but "authority" is apparently any ingenuous speaker of L rather than some trained lexicographer, say, or some usage-conscious teacher of L. Apparently, if a speaker hears a sentence like the following, he is supposed to say it is grammatical: "Onions are choice chopsticks in a bootblack's yacht." Also "He is emptum who gern" is ungrammatical, but "He is emptum who gerns" is grammatical.

reinforced with certain variables — an academic interest began to develop, somewhat slowly at first, in the relationship between generative theory and general linguistic theory; and, importantly, during the decade a number of pedagogical generative grammars have appeared in the schools, many of them marking a clean break with tradition. Already some of these books are making notable changes in many school systems with the result that the number of linguistically oriented programs of English is rapidly increasing.

Among the most recent of the textbooks for linguistic instruction on the college level are those by Roberts (1964, a minutely programmed textbook in generative grammar); Bach (1964, strictly transformational, far from elementary, enriched with challenging problems); Thomas (1965, a significant pedagogical book on transformationalism with well-written commentary and explicit formulations); Gleason (1965, an extensive and scholarly treatment of twentieth-century grammatical approaches with detailed chapters on generative grammar); Koutsoudas (1966, a discussion of generative grammar with a formulation of grammars of subparts of many languages, including some from English, selected to cover a wide range of transformational problems); Stageberg (1966, a superlative introduction to English linguistics, perhaps unexcelled as a first course, supplemented by ample exercises in phonemics, morphemics, constituent analysis, syntactic types, and a chapter on transformations by Ralph Goodman).

The references mentioned above, together with a mounting volume of scholarly studies of specific problems, show considerable difference of opinion and approach with reference to many points of theory as well as practice, particularly in certain areas of analysis. One of these involves the concept of the elementary sentence (kernel or matrix sentence) and its position in transformational theory. Certain grammarians (see Roberts, 1962, pp. 19-57 and Goodman in Stageberg, 1966, pp. 293 ff.) isolate as many as nine or ten matrix types, whereas Thomas (1965, p. 35), for example, organizes structural analyses from only four matrix types. There is, moreover, convincing argument to the effect that the whole matrix-sentence basis may have to be reformulated or perhaps discarded as generative theory develops (Winter, 1965, pp. 484 ff.; Quirk, 1965,

p. 214; Schachter, 1962, pp. 692-697). Shachter's demonstration (1962, p. 695) that even the passive, the prototype of all transforms, can be developed by PS rules and the explosion of Chomsky's generalization (1957, p. 72) concerning the origin of attributives in the *S - be - Adj* matrix type (Winter, 1965, pp. 484 ff.), as well as the embarrassing fact that active constructs exist without idiomatic passive counterforms (middle verbs), give strong support to the idea of revision in transformational theory.

Among the pedagogical authors, wide differences appear about the amount and kind of work that can be assigned to the various classes of rules. One author (Gleason, 1965, pp. 220-250) freely applies morphological (M)-rules to accomplish tasks another (Thomas, 1965, p. 102) performs by the application of obligatory transformational (T)-rules. Or an author like Gleason proceeds much further with PS rules before introducing T-rules than, say, Thomas, who introduces "flip-flop" T-rules to permute lexical and grammatical morphemes before applying the M-rules (see Thomas, 1965, pp. 65, 68 and Gleason, 1965, pp. 226 ff.). Additional problems, not uniformly solved, involve the lexical subclasses, particularly those of the nominal. For instance, some authors have human-nonhuman or count-mass oppositions or animate-inanimate classes, but no author, to the present writer's knowledge, has made a generic-count opposition to resolve the intrusive homonymy exhibited, for example, by the following invalid syllogism:

Major premise: Whooping cranes are almost extinct.
Minor premise: These two birds are whooping cranes.
Conclusion: These two birds are almost extinct.

Though generative theory has undergone some change since 1957 and pedagogical implementation of it is divergent, recent reformulation of Chomsky's definition of a generative grammar has added little and taken little away. Grammarians from Chomsky to Koutsoudas (1966, p. 4) insist that a grammar generate and describe. An "ideal" definition upon which we shall rely to construct several limited or controlled grammars illustrative of procedures in generative theory, with the hope of providing thereby a test of the adequacy of the theory and its implementation, is as follows:

> A generative grammar is a process whereby a finite set of operational rules, acting upon a finite set of symbols, will derive an infinite set of well-formed SS and only these and assign to each such S its proper structural description.

Whether such a grammar as defined here is a device, as Chomsky originally said, or a process, as our definition says, would seem of little importance if we understand that it must operate upon a body of linguistic experience to generate an infinite set of unique SS. Through the application of a set of operational rules R to a corpus of linguistic data here taken as a finite set of initial strings N, we can write controlled grammars of some subparts of English that will be adequate for the subparts. Of course, we can proceed only when the sets R and N contain at least one member each and only when we apply the operational rules completely, one at a time, if there are more than one.

Given, then, a member of N as X and a lexicon containing two restricted classes, A and B, with *a* representing any member(s)[4] of the class A of American boys' names and *b* representing any member(s) of the class B of nontransitive, noncopulative, nondefective verbs of complete predication with imperative privilege of occurrence only, we can produce such segmental sequences as *tommy look, mike listen,* etc. The grammar can be conveniently summarized and stated as

(I) N: X
R: X —> *ab*

where the rule R is to be interpreted as "Rewrite X as *ab*." On a segmental basis, the language described by this grammar is minimal and finite. In fact, without a suprasegmental morphemic system applied as M-rules (see Thomas, 1965, pp. 59-60, for a discussion of the two types; also Gleason, 1965, pp. 226-227, n.), we do not have linguistically structured terminal strings. However, if we apply M-rules, we can structure the lexical terminal strings either morphographemically or morphophonemically. For example, let us apply the M-rules here as in conventional graphemics and structure the segments in italic Century allographs: *Tommy, look! Mike, listen!*

[4]In Grammars II, III, IV, and V, if a PS terminal symbol such as *a* appears more than once in a sequence through the operation of a recursive rule (see Grammar II and related discussion), it is taken to mean the *same* or a *different* member of its class for each appearance in the sequence.

Highly restricted by its syntax, even to the rigid order of appearance of the lexical items, the language is finite or, as presented here, a finite subpart of a natural language: A and B are both limited, and their range of occurrence is limited; that is, the sets of entries assigned to A and B are both finite, and the one rule given contains no device whereby A and B could be expanded to contain other lexical terms which could then be rearranged or recursively selected. It is obvious, therefore, that the grammar considered here cannot describe a natural language consisting of an infinite set of SS, nor can it generate an S longer than two words.

Let us now see what can be done to expand this minimal language. In deriving the terminal strings *tommy look* and *mike listen,* Grammar I utilized one instructional formula, X —> *ab,* and selections from the two categories, A and B. Since the categories of all possible lexical entries in L are finite sets of morphemes, it would be impossible to generate an infinite set of SS, or an S of indefinite length, no matter how extensive the rewrite rules, unless the generative process could provide some method of reapplication of one or more of the rules. Such a method or principle can be successfully introduced in both the PS rules and the T-rules of generative grammars where it will reenter morphemic values, but the device, adopted from logic, where it is called a *recursive specification,* will not alone permit a grammar to generate an infinite set of grammatical SS. In fact, care must be exercised to remove unwanted recursiveness from grammars and from definitions where the details must be both inclusive and exclusive.[5] A classic example of the recursive rule is found in arithmetic (Hughes and Londey, 1965, p. 49):

[5]Hill (1958, p. 168), in an effort to provide a class of adjectives with a "form and distribution" definition, permitted a recursive to intrude into his definition and allow such forms as **slowerest, *slowesterest,* etc. His statement reads: ". . . any word having the distributional characteristics of *slow* and capable of being modified by the addition of *-er* and *-est* is an adjective, and the resultant constructions containing the postbases *-er* and *-est* are also adjectives." And (p. 121) ". . . a postbase must be described as a morpheme which can follow a base or another postbase." Aside from the fact that not all adjectives are included (*e.g., perfect*), such a "form and distribution" definition, even if free of adventitious recursiveness, is not applicable to generative theory, by which the derivative process assigns to each generated string its proper description without recourse to formal, syntactic, or notional definitions (see Bach, 1964, p. 28).

(1) 1 is a positive integer.
(2) If n is a positive integer, $n + 1$ is a positive integer.

The recursive property may be written into the PS component of a generative grammar by the simple method of entering on the right-hand side of a lower order operational rule a productive nonterminal symbol *after* this symbol has appeared on the left-hand side of a higher order rule. The symbol may then recursively introduce its own values infinitely many times, and each time the grammar will ultimately generate these values into PS terminal symbols. However, unless the symbols thus generated can select appropriate forms for the lexical terminal strings, the recursive will cause the grammar to generate ungrammatical structures. Let us add to Grammar I a simple recursive rule (Chomsky, 1957, p. 30) and see to what extent, if any, the generative capacity has been improved:

(II) X —> *ab*
X —> *a*X*b*

The recursive property now makes it possible to expand the symbolic sequences of this grammar indefinitely: *ab, aabb, aaabbb,* . . . , where n *a*'s are followed by n *b*'s. This rule means in effect: "Insert X in all occurrences of an *a*—*b*." Instead of replacing *a* or *b*, it has the effect of expanding *ab* from the middle, lengthening each succeeding string. If we let the symbols select vocabulary entries from I, we find that the subparts of English generated here could hardly be more extensive, say, than the third sequence.

If we assign other lexical values to A and B, the resulting terminal strings will also quickly arrive at a state of such complexity that they could hardly be classed as "grammatical" even under the most liberal use of the term. It is possible, however, that II is better adapted to those subparts of English where SS take the form of such dependencies in logic as "if . . . then . . . ," "either . . . or . . . ," and certain other trans-conjunction or trans-comma co-occurrences. We could generate "If *a*, then *b*"; "If *a* and *a*, then *b* and *b*"; "If *a* and *a* and *a*, then *b* and *b* and *b*"; etc. We could find some clause dependencies to assign to the two lexical categories and generate some SS grammatical in English, but here also, as these segments

increase in length, the level of grammaticality rapidly declines (see n. 7). Thus in II, the addition of the recursive property, which is apparently common to all natural languages as a function necessary to achieve potentially infinite SS as well as SS of indefinite length, does not infinitely increase grammatical productivity.

Both Chomsky (1957, p. 22) and Bach (1964, p. 31) propose the mirror-image sequence as another example of an infinite language, but neither of them suggests how a grammar of this language could be written, and the problem of finding morphemic values for the sequences generated is quite as acute as in II. That the first few sequences will generate subparts of English can be demonstrated as for II, but here the "extremity" dependencies become rapidly very complex and ungrammatical in the sense of "no remote likelihood of any occurrence in L." The grammar that will generate all mirror images and only these — that is, sequences no matter how long which, when replicated in the middle, will permit all like symbols to coincide and no unlike ones — can be written as follows:

(III)
X —> *aa*
X —> *bb*
X —> *a*X*a*
X —> *b*X*b*

The sequences generated by these rules will all be mirror images, and the language will be a mirror-image language: *aa, bb, abba, baab, aaaa, bbbb, aabbaa, abbbba,* . . . .

An infinite language in which no mirror images will appear in any centrally replicated string can be generated by a grammar composed of the rules of Grammar II and their permutations, but lexical problems prohibit the application of this grammar, like III, to more than minimal subparts of English:

(IV)
X —> *ab*
X —> *ba*
X —> *a*X*b*
X —> *b*X*a*

Here the strings will all lie opposite those of III: *ab, ba, aabb, bbaa, abab, baba, ababab, bababa, abaababbab, babbabaaba,*

. . . . It may be noticed that each pair of sequences as they are ordered here from the first to the last is a palindrome. For example, the last pair *abaababbab, babbabaaba* will read the same from left to right as from right to left, a fact which suggests that Grammar IV may present rewarding subjects for dependency research. It may also be noticed that the pairs as ordered here and when replicated *between* the two sequences of the pairs will be mirror images, but not all sequences generated by IV can be ordered as mirror-image pairs.

Such grammars as the foregoing form the basis of proof that a finite set of rules can generate an infinite set of sequences and sequences of indefinite length, a procedure that had to be established before a generative theory of natural language could be constructed on a substantial foundation.

With the theoretical basis established, a conventional plan for writing the rules of generative grammars includes an initial-string symbol #S# and a set of rewrite rules, which are applied, one at a time, until a terminal string has been derived. Then a labeled P-marker can be constructed to show the derivation.

We begin with the initial string #S# as a condition of our theory as set for the preceding grammars [N, R], where X = #S#, (see Chomsky's "Sigma Eff" model, 1957, pp. 30, ff.) and apply the rules R until the process is completed by the selection of appropriate terms from the lexicon and written for the PS terminal symbols, which are expressed here as lower-case italic letters:

(V)	Given	#S#
	PS 1.	S —> NP + VP
	PS 2.	NP —> D + N
	PS 3.	VP —> V
	PS 4.	D —> *d*
	PS 5.	N —> *n*
	PS 6.	V —> *v*

Now suppose we prescribe L-rules that will permit *d* to select any element(s) from the set of English articles (see n. 4): {*a, an, the*};[6] *n* to select any element(s) from the set of all

[6]An obligatory T-rule prohibits SS like **a orphan weeps* or **an girl laughs*. Tob: $a(n)\ \#\ \begin{bmatrix} V \\ C \end{bmatrix} => \begin{bmatrix} an \\ a \end{bmatrix}\ \#\ \begin{bmatrix} V \\ C \end{bmatrix}$, when # = word boundary, V = vowel, C = consonant.

singular human nouns: {*man, woman, cowboy, . . . , n*}; and *v* to select any element(s) from the set of verbs in Grammar I, now restricted by the third person indicative singular morpheme {Z$_1$}: {*looks, stops, shoots, . . . , v*}. We now can apply the rules as follows:

					Given
#S#					
NP	+	VP			1.
D	+	N	+	VP	2.
D	+	N	+	V	3.
d	+	N	+	V	4.
the	+	n	+	V	5.
the	+	boy	+	v	6.
#the	+	boy	+	jumps#	

This grammar, like I, is finite, and can generate SS only of the pattern permitted by the PS rules and the L-rules; that is, every lexical terminal string will contain an item *d* plus an item *n* plus an item *v*. The intransitive verbs from the set as described are restricted by a morpheme that will provide a preselected tense and permit proper co-occurrence with any item *n*. However, the grammatical morphemes in Grammar V are included in the lexicon for simplicity of illustration only. In subsequent derivations, they will be selected by appropriate rules as separate components. A P-marker in the form of a labeled tree will illustrate the derivation in Grammar V (Fig. 1):

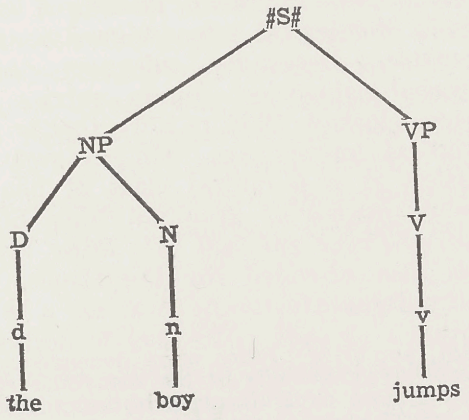

Fig. 1

If we undertake to expand the scope of Grammar V by incorporating a recursive rule, say,

$$N \longrightarrow S$$

we can generate an infinite set of sequences of whatever length of the form *dnv, ddnvv, dddnvvv,* . . . , but the application of this rule will not increase the adequacy of V. In fact, even one application of the recursive will render any sequence ungrammatical, for it will select multiple articles before *n* and generate such sequences as **the a father listens wonders.* A second application would produce a pattern like **the an a mother looks listens fears.*

It might be possible to generate more grammatical SS by permitting the PS terminal symbols to make selections from more extensive lexical classifications, especially *d,* but as the P-marker (Fig. 1) shows, *n* is a nominal, and the class of prenominals is not very extensive (Thomas, 1965, pp. 79 ff.). Therefore, in expanding lexical classes, one must exercise care to assure proper co-occurrence with all entries. From the P-marker, it can be seen that NP dominates D and N and that N + V is not a structure of S. Likewise *d* + *v* is not a structure of S. NP + VP is a structure of S, in fact, is an S; also *d* + *n* is a structure of S but not an S. Such considerations, as well as many others, limit the capacity of Grammar V, as well as all other PS grammars, to make wide choices from the lexicon.

It is axiomatic in generative grammar that adequacy with respect to structural descriptions is influenced by the character of the entries in the lexical sets assigned to the symbols in the deep structure. Descriptive adequacy decreases to the extent that verbal categories contain entries more complex than lexemes (see Hockett, 1958, p. 170), that is, *words* stripped of all grammatical morphemes. For example, it might be possible to assign to *n* a limited class of noun clauses and generate in some degree of grammaticality SS such as the following: *the whatever you call this thing leaks,* but unless a P-marker is also provided for the clause, the structural description is inadequate.[7]

[7]Chomsky (1957, pp. 21-22) relies upon dependency clauses exclusively for the lexical components of his non-finite structures. With the models used, a more explicit categorization could not have been applied; that is, morphemes, as we have shown, could not survive an application of the recursive rule in a grammar like V.

The fact that some entries in the lexica of the grammars described above are larger units than lexemes weakens the structural description of any SS generated by these grammars but perhaps sharpens the point in question that string-replacement or PS grammars may be inadequate, even with recursive devices, to generate explicitly and simply an infinite number of grammatical SS. At best, they may yield only a few SS of varying degrees of grammaticality in selected subparts of English. Even if a grammar such as V, which generates successfully some members of a matrix class of sentences, even without a recursive rule, could be devised for each subpart of English, such a collection would not constitute an adequate grammar of English in the sense contemplated by generative theory. In fact, it probably would be impossible to perfect a system for isolating the "subparts" of English or to write adequate grammars of them all if they could be determined. The search for adequacy must, therefore, seek new directions.

In the decade since *Syntactic Structures* appeared, much discussion among grammarians, many of them just emerging from the cocoon of Bloomfieldian structuralism, has centered about the PS component *vs.* the T component in generative grammars. And, as noted above, the pedagogical grammars of the mid-1960's differ in important respects concerning these operations (for one additional example of these differences, the generation of the negative, compare Chomsky, 1957, p. 112, with Lees, 1960, pp. 5-6, 18-19, 43-44, with Gleason, 1965, pp. 234-236). However, there is general agreement that a transformational component with a set of rules designed to make changes in basic structures generated by PS rules can simplify the grammar to a certain extent and accomplish certain tasks that additional PS rules could accomplish only with great complexity, if at all. T-rules characteristically perform one or more of the following operations upon underlying P-markers or derived P-markers: adjunction, deletion, permutation, and substitution.

In the last of a series of grammars written here as a practical demonstration of generative theory, a more extensive set of PS rules will be applied to generate a matrix sentence of a different basic type from that of V, and then certain transformational operations will be performed upon the underlying

P-marker and derived P-marker to see, perhaps very generally and inconclusively, whether grammatical adequacy has been materially influenced by the additions and changes since operations of this sort are the only ones available at the present state of generative theory. For the sake of brevity, certain conventions observed in V will be omitted here:

(VI)

		#S#						
PS 1.	S	—>	NP-1	+	VP	+	*Adv*	
PS 2.	NP-1	—>	D	+	N-an(imate)			
PS 3.	VP	—>	Aux	+	MV			
PS 4.	Aux	—>	Tn					
PS 5.	MV	—>	V	+	NP-2			
PS 6.	NP-2	—>	D	+	N-in(animate)			
PS 7.	Tn	—>	Pas					
L 1.	*Adv*	—>	*at last*					
L 2.	D	—>	*the, a*					
L 3.	N-an	—>	*boy*					
L 4.	V	—>	*find*					
L 5.	N-in	—>	*home*					

Proceeding as in V, we apply the rules and derive the terminal string:

#S#																	
NP-1				+			VP	+	*Adv*								PS 1.
D	+	N-an	+				VP	+	*Adv*								PS 2.
D	+	N-an	+	Aux			+		MV	+	*Adv*						PS 3.
D	+	N-an	+	Tn			+		MV	+	*Adv*						PS 4.
D	+	N-an	+	Tn	+	V	+		NP-2	+	*Adv*						PS 5.
D	+	N-an	+	Tn	+	V	+	D	+	N-in	+	*Adv*					PS 6.
D	+	N-an	+	Pas	+	V	+	D	+	N-in	+	*Adv*					PS 7.
#the	+	boy	+	Pas	+	find	+	a	+	home	+	at last#					L 1-5

To achieve the tense required, we may use directly Gleason's table of M-rules (1965, p. 226) or first apply a T-rule $Af + v \Rightarrow v + Af$ (Thomas, 1965, p. 64) and then derive *found* by M-rules. The lines of the derivation will reveal the order in which the rules were applied to achieve a PS terminal string. A labeled-tree P-marker will constitute a formal representation of the constituent structure of the sequence (Fig. 2):

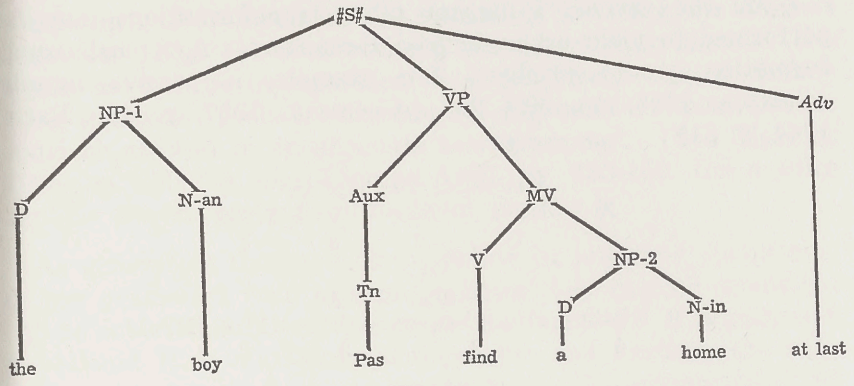

Fig. 2

Suppose now we apply a permutational T-rule to effect a change in position of the adverb in VI. Such rules cause an exchange of position of two adjacent constituents or rearrange constituents in a P-marker. First the structural analysis (SD) upon which the T-rule will operate is obtained from the underlying P-marker. The operation will then produce the structural change (SC). This SC may then become a derived P-marker on which other transformations may be performed. (See Koutsoudas, 1966, p. 25). Unlike PS rules, more than one T-rule may be applied simultaneously as will be demonstrated in the passive transformation.

Structural Description				Structural Change			
NP-1	- VP -	Adv	=>	Adv	- NP-1 -	VP	
1	2	3		3	1	2	

From the structural change brought about by the operation of this transformation we obtain a derived P-marker:

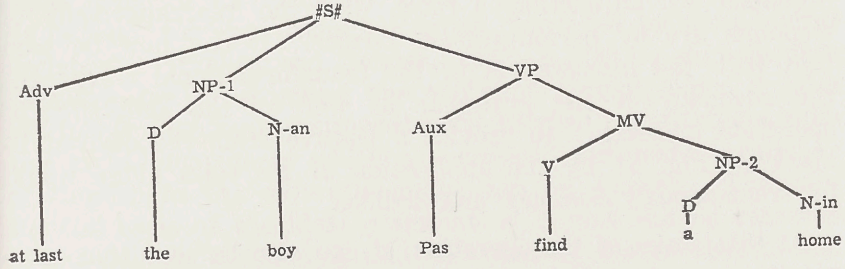

Fig. 3

Upon the derived P-marker other transformations may be performed to yield other derived P-markers. A typical transformation would produce, for example, a passive agnate (Gleason, 1965, pp. 202, 257; Chomsky, 1957, p. 43; Bach, 1964, p. 81):

Structural Description

X - NP-1 - Aux - V - NP-2
1 2 3 4

=>

Structural Change

X - NP-2 - Aux+*be*+*en* - V - (P + NP-1)
4 2 3 1

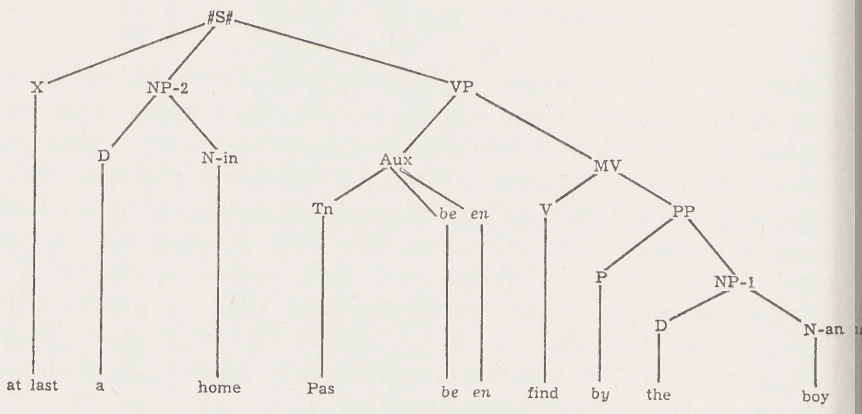

Fig. 4

By application of appropriate M-rules (Gleason, 1965, pp. 226, 228, 240) or appropriate T-rules and M-rules (Thomas, 1965, p. 64; Chomsky, 1957, p. 39), the sequence can be structured graphemically as *At last a home was found by the boy*. The italicized morphs in the terminal strings are those produced by adjunction T-rules, and the rearrangement of elements are by permutational T-rules. It can now be seen that with the introduction of the transformational component the adequacy of the grammar as well as the simplicity of operation increases: to provide a passive from the derived P-marker (Fig. 3) by the application of PS rules alone would be tremendously complex and tedious.

At this stage of the operation, it can also be seen that complexity can enter the grammar through the transformational

component. For instance, the process of creating the derived P-marker (Fig. 4), even without the dependency signals that would have to be incorporated in a completely explicit underlying P-marker, probably exceeds the degree of complexity that could be allowed in an adequate new grammar. (See Gleason, 1965, pp. 250-298, and Thomas, 1965, pp. 135-150, for a fully explicit generative-transformational process.)

As generative theory is now applied in practical operations, as our grammars tend to show, a completely explicit operation can be achieved only at the expense of simplicity. If a grammar like I and II is maximally both simple and explicit, the subparts of L in which it can generate all the grammatical SS are strictly circumscribed by the nature of the structures, and the grammar is minimally extensive and complete. If we write rules of a broader coverage, we lose explicitness and tend to vitiate the grammar: "Rewrite NP as *A friend of mine just back from Viet Nam* and VP as *revealed to me something of our commitment there.*"

The property of formality, the symbolic mechanism, seems quite the most precisely developed of all the qualities demanded of an adequate generative grammar. This is a fact worth noting well, for like propositional calculus and certain other elements of formal logic, from which generative theory takes some of its forms (the idea of the well-formed formulae, wff's, of formal logic is clearly reflected in the "well-formed sentence" concept of generative theory), the symbolic representations of generative grammar admit a minimum of subjective intrusion.

On the other hand, the very fact that generative theory takes much of its formality from logic may eventually mark its defeat; for even though English "enriched by meta-logical variables" (Hughes and Londey, 1965, p. 48) is an adequate language for constructing the wff's of formal logic, it does not follow that logic reinforced with English constitutes a suitable meta-language in which a successful generative grammar of English as the object language can be written. The substantial basis of the ideal grammar of L may not be centered in the domain of logic at all. It could be that a search into the deep strengths of poetry and into the nature of creativity

itself (the natural production of SS grammatical in L is an act of creativity resulting in something new, unique, and well-formed) would be more successful than logic in yielding up the secret forms of internal language.

English itself is not a "logical" language. Though capable of being tamed and conditioned to the exacting demands of the propositions of logic, English is naturally free, often aberrant and irrational, and frequently most powerful when its paradigmatic forms are distorted and its extensional meaning is vagrant or nil. Can any formalistic system now available generate the "structured segments" of this one stanza of e. e. cummings?

> what if a much of a which of a wind
> gives the truth to summer's lie;
> bloodies with dizzying leaves the sun
> and yanks immortal stars awry?
> Blow king to beggar and queen to seem
> (blow friend to fiend: blow space to time)
> —when stars are hanged and oceans drowned,
> the single secret will still be man

As Myers (1966, p. 315) points out, it is not easy to see what the grammar of the future will be. Research recently published or in progress suggests that the following areas will receive the great weight of attention in the immediate future:

1. The theory of integrated descriptions will no doubt continue to attract attention. The aim is to integrate the generative theory of syntax with certain conceptions of semantics. For references, see Katz and Postal (1964) and bibliography.
2. Stratificational grammar, perhaps the next most important advance in linguistics, is now attracting favorable comment. Gleason (1965, p. 243) says of it, "There is required an additional 'level,' 'stratum,' or 'system' of some kind. . . . It is my personal conviction that the model coming to be known as stratificational grammar offers the best possibilities." This model also provides for structure-notion integration.
3. Those areas of childhood psychology and education concerned with language learning, reading, and speech correction will provide data of significance to professional

linguistic theoreticians, particularly psycholinguists who are in search of clues to the internal language mechanism which might be reflected in the rapid growth of language abilities in young children (Gleason, 1965, pp. 60-63).

4. Linguists are increasingly examining the past with the thought that much of it may be pertinent to the future. For instance, Chomsky (1965, p. v) sees Panini's Sanscrit grammar as "a 'generative grammar' in essentially the contemporary sense of the term."

5. If generative theory continues to develop, no doubt more effort will be given to writing simple and explicit pedagogical grammars that will withstand the tug of the schoolroom; and if Myers (1966, p. 314) is right, it may well be that the generative theory will eventually prevail:

> Generative-transformational grammar is intrinsically more coherent than either of the other approaches. It has already demonstrated that certain apparent irregularities are actual developments of deeper layers of linguistic structure not previously investigated; and it may go further. We cannot say whether the basic theories, or merely certain conclusions to be drawn from them, will be appropriate for teaching to the general public; but the contribution in either case will be important.

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THE IMAGE OF NEW YORK IN FICTION 1840–1850

L. D. GELLER and ANNE D. GELLER

> Come, it is New York that we are about to enter. It shines over the North River . . . . We feel a strange feeling creep through our veins as the Great City breaks upon our view. It is a feeling of admiration for the gorgeous display of human energy presented in the very sight of the city . . . . The feeling of wonder, for the unbounded wealth which is embodied in the splendid mansions . . . and . . . a feeling of horror . . . for the unfathomable misery which now staggers to and fro, in the very heart [of the City] where all its life, its misery and its joy, its luxury and its crimes, its velvet and its rags are tossed together in that grand focus — BROADWAY.[1]

Broadway was the main street of the fiction imaging New York City in the decade of the 1840's. There is scarcely a character mentioned in all the works, whether by the reformers, the social commentators, or the travelers, who, at one time or another, did not make an appearance on that thoroughfare.[2] But, this was not the "great white way" with macadamized pavement underfoot and electric lights overhead. The Broadway of the 1840's was the one most frequented "between the Battery and Bond Street."[3] Because after a rainstorm it was little more than a gully, it inspired one writer to look forward to the "Russ pavement of . . . the granite millenium."[4] Despite this drawback, Broadway connoted the essence of the metropolis to its inhabitants, as characterized through the eyes of contemporary writers:

> There are hundreds and thousands in New York who cannot live out of Broadway; who must breathe its air at least once in the day or they gasp and perish. They are creatures of convention . . . whose chief enjoyment of this

[1]George Lippard, *The Empire City* (New York: Stringer & Townsend, 1850), pp. 133-134.

[2]Though only dealt with briefly, these three types of fiction merit attention. At any rate, Broadway certainly was that grand focus for all three.

[3]Joseph Ingraham, *Frank Rivers* (Boston: E. P. Williams, 1843), p. 38.

[4]George Foster, *New York in Slices* (New York: W. F. Burgess, 1849), pp. 8-9.

> world is to have certain hats touched by them every day — then their life is complete. This is their morning's anticipation, their evening's reminiscence, and when at length they find this world and its offers closing upon them, they call a confidential friend to their bedside and whisper in his ear, as they are going, "Let the funeral go through Broadway."[5]

If one were to take a Dripps' Map of the City of New York for 1851 and plot with the use of pins the most often cited public places, Broadway from the Battery to Bond Street would bristle with pins.[6] Moreover, and this is peculiarly indicative of the decade, it would be the west side of the street that was noted most often. It is almost uncanny how, with this in mind, one can foretell the end or destiny of a given character, simply by noting which side of Broadway he or she frequents. Heroes and heroines are indigenous to the west or "golden side."[7] Conversely, only villains or "shady," undecided characters people the east side, precisely because "to anyone that walks there, Broadway has but one side, the west promenade; no one even notices anyone on the east pave . . . ."[8] Thus, for example, Harry Glindon, an escaped convict, passed unhampered through Broadway, seen only by the reader.[9]

The image projected by the City is anything but a still life. It is replete with references to the "noisy discord of the street, which gives the ear no rest."[10] The ceaseless din and activity were characteristic of the City, noted for its "crowded streets, the exchange and the counting rooms."[11] The dynamic growth and change of the City, whose population between 1840 and 1850 swelled from 300,000 to 500,000, revealed itself in the

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[5]This actually represents two writers, curiously, though neither one notes the other: Foster, *New York in Slices*, pp. 10-13 and a non-fiction guidebook by Cornelius Mathews: *Pen and Ink Drawing of Manhattan* (1853), pp. 30-37.

[6]The Dripps' Map, according to the N. Y. Historical Society, is probably one of the most accurate, and this researcher has an 1851 edition to "image" the City from the mass of details extrapolated and herein re-created.

[7]Ingraham, *Frank Rivers*, p. 68.

[8]Ingraham, p. 49.

[9]George Thompson, *Harry Glindens: or The Man of Many Crimes* (New York: none given, 1854), *passim*.

[10]Lydia Child, *Letters from New York* (New York: Charles Francis & Co., 1843), p. 1.

[11](Anon) *Constance* (New York: Gould, Newman and Saxton, 1841), p. 93.

northward thrust of Broadway.[12] Particularly in the progress of residential addresses, this phenomenon was borne out. Thus, in the beginning of the decade, those characters peopling the crowded streets and the curbside exchange resided on Broadway, of course, but between the Battery and City Hall Park, *e.g.* Park Place.[13] In the middle of the '40's, the residential area hovered around Waverly Place and Washington Square.[14] By mid-century, the homes of city dwellers were in the vicinity of 14th Street.[15] Thus, in this decade three "Parks" served as residential hubs: City Hall, Washington Square, and Union Square.

Other areas of the city complex evidenced the steady expansion of the decade, *e.g.* theaters, hotels, etc.[16] The essential point, however, was the character of the metropolis as one epitomizing continuous and unceasing change, even at a time when "five miles from City Hall, New York," was out-of-town, and 42nd Street was still in the "suburbs."[17] So familiar and mundane was this to city dwellers, a writer required no other device but simply recourse to everyday experience to advance the plot of his story. Thus, for example, Burdett had a crucial episode in *The Gamblers* transpire during which the hero, Starr, a detective, having captured a robber in a mercantile establishment, was deprived of his prize. For, walking with the culprit to the precinct station near John and Pearl Streets, Starr fell into a construction site in the middle of the street "caused by the laying of some gas or water pipe."[18] Of course, the robber escaped.[19] Even then, such expressions as the opening lament of the novel *Big Abel and the Little Manhattan* were

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[12]Population figures from: Bridenbaugh, *Cities in the Wilderness*, a detailed study of population growth of NYC available therein; also, for interpretation and corroboration: Bayrd Still, *Mirror for Gotham* (New York: NYU Press, 1956).

[13–15]Maria Buckley, *Edith Moreton* (New York: Published privately, 1852) opens in January, 1841; Charles Burdett, *Chances and Changes* (New York: D. Appleton & Co., 1846) set in mid-forties; and, (anon) *Squints* (New York: Merchant's Day-Book, 1850) regarding the "Astor-ocracy" of the upper City of 14th Street.

[16]Cornelius Mathews, *Big Abel and the Little Manhattan* (New York: Wiley & Putnam, 1845), views the move of the theater "district" in a northerly direction.

[17]Mathews.

[18]Charles Burdett, *The Gamblers* (New York: Baker and Scribner, 1848), p. 91.

[19]Of course, via the east side of Broadway.

rife: "Build as you may, Old Gotham! Hammer and ding and trowel . . . gone into the suburbs . . . ."[20]

The reference to the antiquity of the metropolis, signified in the epithet "Old Gotham," demonstrated awareness of the centuries-long history of this city. In a sense, it echoes a sentiment that has reverberated since then, not only about the character, but about the impression left by the City upon all those who have "experienced" it.[21] Though there is no real "city novel" for this period, there are a few fictional works which, in conjuring up the image of the City, attempted to utilize it as something more than a mere backdrop for action. One such work exemplifying this coterie was George Lippard's *The Empire City*:

> . . . behold, the Island. What — this wilderness of stone and brick and mortar, dissected by streets. . . . This the green Island, where once the swelling hills arose . . . the hamlet by the waterside. . . .
>
> Yes. The green Island where the redman built his frail bark-circle among the trees, has become the City of the New World . . . . The Empire City . . . upon her bay the ships of every sea, within her streets the people of every tongue, behold her as she throbs . . . beneath that cloud made luminous by her glare [of gas-lights], the Empire City clad in purple and rags, splendid with countless wealth, festering with countless crimes. . . .
>
> How then shall you image the Empire City?
>
> As a voluptuous queen sitting in her gorgeous palace . . . the Empire over which she reigns . . . an empire of palaces and hovels, garlands and chains, churches and jails.
>
> Twenty-one years have done much for the Island of Manhattan. In 1823 the presumptuous rival of Philadelphia, now its master; whirled along by the impulse of the commerce of the world, leaving the Quaker city on its Delaware shore . . . . Twenty-one years more, perchance, the . . . Empire City of the World.[22]

Lippard used these two dates to circumscribe the action of his work. *The Empire City* is the story of the Van Huyden estate, the coming of age of the young Van Huyden, and the

[20]Mathews, *Big Abel*, pp. 1-2.
[21]*e.g.* Fitzgerald, and the "fresh, green breast of the New World."
[22]Lippard, *The Empire City*, pp. 133-137.

maturing of a will which bears upon both of them. The book reflected the typical concerns of the fiction of manners, concerns with marriages, births, deaths, wills, estates, property transfers. But, more important than these, it focused upon the awareness and analysis of the emergence of New York as the Empire City. For what "made" New York in this period, as appears from a body of historical research, was the opening of the Erie Canal in 1825.[23]

New York City from its inception has been a port city, but the advent of the Canal magnified importance into preëminence.[24] Nearly twenty years of growth solidified the gains consequent upon that crucial event. And Lippard was not being fanciful or imaginative when he conjured up the image of the unbounded wealth of this City. The City Directories provided ample confirmation of the reality of that image, with their listing of the Astors and Vanderbilts and Lorillards, *et al.* And, when they and others like them made their names and fortunes, they did so unhampered by governmental controls, unfettered by massive taxes, and unrestricted by organized labor's demands. In fact, the initial use of the peculiarly American term "millionaire," was in New York City in the 1840's.[25] What has since become a staple feature of affluent New York society, the millionaire yachtsman, similarly, was first recorded in the fiction of the '40's.[26] The many who constituted and were characteristic of the latter society owned those "splendid mansions" on Broadway, as aforementioned, and magnificent estates on Long Island. During, the oppressive heat of summer, of course, anyone who "counted" quit the City for the posh watering spots at Saratoga and Newport.[27] It may have been a poetic and rhetorical question Lippard posed, "How then shall you image the Empire City?" At least by suggestion, the image of New York connoted a society on the make.

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[23]William Miller, "The Realm of Wealth," in *The Reconstruction of American History,* ed. by John Higham (New York: Harper & Bros., 1962); Still, *Mirror.*

[24]Miller's article is two-pronged: this is the second of the two; also, the classic, Albion, *The Rise of the New York Port.*

[25]Miller, *The Realm;* this is the first "prong" showing first use of the word in 1843, obituary for Lorillard, snuff maker.

[26]Charles Averill, *The Secrets of the Twin Cities* (Boston: Printed and published by George H. Williams, 1849), *passim.*

[27]These were *the* resorts in the area, according to fiction and newspapers of the decade.

In Anna Mowatt's *The Fortune Hunter,* Brainard and Ellery, the leading characters, discuss the how of making one's fortune in New York City. It was for this purpose that Brainard, lately of Baltimore, chanced New York. His financial situation has deteriorated to the point that he, like Queen Elizabeth long before him, "visits" all of his friends, on all sorts of pretexts.[28] In this fashion, he avoids any unnecessary, which means all, outlay of money. From the enlightening conversation of these two, there were three ways to get ahead in this City. One was in the stock market speculation in Wall Street. Another was through the lottery. The third and best way was through marriage. According to Ellery, the latter path was the surest of success.[29] The one and only important thing one must remember, Ellery says, is that nearly everybody with money in this City is seeking to perpetuate his own dynasty, precisely because of its recent vintage:

> . . . especially in this City, every pretension to distinction of any kind is supposed, of course, to originate from the money-bag and is strictly measured by the yard-stick. Beyond the counting-house and broker's den, there can be nothing enviable, nothing worth exploring. The world has but one gate, and that is a golden one. Its cards of ceremony are drafts and acceptances, its invitations are bank bills.[30]

The genius of its mentality was epitomized thus: "We had no money — we were nothing; They have no money — they are nothing."[31]

It should be a source of little wonder that the most popular play of the decade was Mowatt's *Fashion,* if only by virtue of its title.[32] And, to be fashionable was a virtue supreme. There was scarcely a word in more common use in New York City in the 1840's than that one. As documentation, one would cite the entire bibliography extant of the contemporary fiction. If there was no other word in more frequent use, there was one closely allied and nearly as often employed with it:

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[28](New York: J. Winchester, 1844); this is one of the few humorous treatments of fashionable life in the City, especially in this discussion of how to avoid picking up the tab.
[29]Mowatt, *in toto.*
[30]*Squints,* p. 1.
[31]*Squints,* p. 6.
[32]See George Odell, *Annals of the New York Stage.*

> Respectable families are very apt to give tea-drinkings where you will find a great many respectable old ladies, who sip Bohea tea out of blue and white china — who talk in subdued tones about the weather, the fashions, the scandal, the respectable books, and the babies and who discourage hilarity in the younger branches of the household, by saying — "My dear, it is not respectable." They have a small library of most respectable books, such as Pilgrim's Progress, Arthur's Tales, Science Made Easy, an odd volume of the Arabian Nights, and Headley's Sacred Mountains. They, of course, subscribe to so respectable a paper as the Commercial Advertiser. . . . They have a respectable card-basket filled with very respectable names; and having passed many respectable evenings at the respectable families, I can, of course, commend you, Fritz, when you come to town, as in every way — respectable.[33]

One such "Fritz," who did come to town, was Joseph Jones of Pineville, Georgia. Within a few days of his arrival on June 2, 1845, Jones remarked that, of all the towns he had visited on his journey from Pineville to Canada, New York had "changed" him the most, "in appearances, at least."[34] He further estimated that it would take the whole year's profits of a Georgia cotton plantation to maintain this appearance. In a town of parvenu wealth, appearances counted for everything; respectability and fashion, bought at the tailor's and milliner's, were measured by the cut of one's clothes and the set of one's hat. But more than broadcloth was patterned to this "golden rule" principle:

> Let an artist, a painter, a musician or actor of the most unquestioned genius come to New York and not patronize the Tribune, for instance — . . . Let a reformer appear advocating the same doctrines and exposing the same abuses upon which that paper gains its notoriety, and profits — should he not happen to belong to the editor's personal clique of adherents and toadies, the Tribune would never hear of his existence. Take a new invention in science or mechanics to the editor for his examination, and you will be sent to the desk to arrange with the advertising clerk for a notice; carry to the office an article stating in express terms that "Snooks' Renovating Hair Dye" absolutely

[33] (Mitchell) *The Lorgnette* (New York: Stringer & Townsend, 1850), p. 17.

[34] William Thompson, *Major Jones's Sketches of Travel* (Philadelphia: Carey & Hart, 1848), p. 117.

> possesses the power of filling a mattress-tick with first-rate curled hair by a single application, and, besides, is a certain specific for fleas, the corns, and fever-and-ague, and you can have it published EDITORIALLY, without any qualification — of reservation whatever — for two shillings a line.
>
> And so of moneyed institutions, rat traps and quack medicines, kickshaws and theology — that which pays is puffed . . . by no means true of the Tribune alone, but of every newspaper in the City of New York, excepting of course the little Merchant's Day Book, for nobody cares anything about what it says. The principle, the only principle, upon which journalism is conducted at the present moment in New York, from the "responsible" editor to the penny-a-line paper of the horrible accidents and the water-rat of the police office, is that of pay for services rendered.[35]

In George Foster's *Celio,* there is a symbolic corollary to this delineation. In that novel an incident, at the climax of the plot, occurred in which an aged opera conductor was supported by a newspaper editor, on the one side, and by a millionaire's son, on the other. Foster wryly commented that these were the pillars of the Opera in the City.[36]

The support of Opera had nothing whatever to do with the love of Mozart or *I Puritani.* Though there may have been genuine opera lovers in this City, not one was portrayed in its fiction. Typical of those who were, of those who went to be *seen* at the Opera, were the following:

> Conspicuous among the conspicuous, seated . . . in the same sofa . . . respose in the conscious dignity of hard-earned money, plump cheeks and white opera cloaks, the head and female branches of one of our first families. Sometimes, the hopeful sprig of the family and heir to its honors and escutcheon may be seen sandwiched between the papa and plump daughter. He is a lathy, lanky, cadaverous-looking, young man whom incessant attempts to smoke segars [sic] which make him sea-sick and gulp down whisky skins . . . turn his stomach. . . . The internal soil of his brain — not very deep nor rich, at best — entirely exhausted by the heavy crop of hempen hair it has been called upon to produce, has long since refused to grow the first blade of an idea. . . . This poor youth, the riches of whose whole life have been squandered ere he has crossed the threshold,

[35] *Squints,* p. 10.
[36] George Foster, *Celio* (New York: Dewitt & Davenport, 1850), p. 117.

> is already notorious for several disgraceful rows, amours with married women, and other fashionable disasters, and may be taken as a fair sample of . . . New York . . . .
> . . . seated behind a striking and bold looking woman is a man who might have sat as the original for Douglas Jerrold's "Man Made of Money." In respect to the credit of firms and individuals, his word is law; while occasionally the whole street is made to palpitate through all its extremities by his movements, as if he were the very heart of that anomalous monster, the Stock Exchange. All he is, however, and all he ever was, or even can hope to be, is by the power of money. . . . Few in any class are so insignificant as he. He has just one faculty — that of making money . . . .[37]

At the same time that New York produced its first genuine millionaire, Clara Elliott earned 2½ cents, per hour, as a seamstress:

> I feel it due to myself briefly to state the reasons which have prompted me to engage in a task of this nature, one more befitting and properly belonging to the female writers, whose feelings would naturally assimilate to, and cause them to sympathize with, the sufferings of the female operatives of this City. In the pages that follow, there is no single line which cannot be supported by abundant proof of its truth . . . . [I have] in no cases assumed the lowest rate of wages paid, but invariably that which may be termed the fairest prices . . . . I repeat, there is nothing of imagination in this volume . . . .[38]

The denial of imagination, as the hallmark of fiction, pervaded the reformist fiction of the '40's. It was in such fiction that Clara Elliott, and others of the City's "Lower Million," appeared, in contrast to the fiction of the "Upper Ten" which pictured the rich. As has been already demonstrated, the latter constituted a major portion of the characters in fiction. The "Reformation" of the decade was certainly not a New York phenomenon. But, insofar as it influenced so many of the writers of the period, it colored the image they presented and its presentation. Above all, the writers of this fiction denied, in fact, that they were writing fiction.

The heightened sense of the present-day was characteristic of much of the fiction of this ilk. If writing for a "cause," one

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[37] *Squints*, pp. 2-4.

must convince his reader of the urgency and immediacy of the problem:

> Not in the olden time when the people differed as much from us in character as well as costume, do we commence this story — but now . . . when every man, woman and child, who reads it, can recognize its characters and description.[39]

The key-note was the belief in the efficacy of moral education. And, according to the writers of the latter-day gospel, the wrongs and vices were "not the necessary result of human life in this . . . City . . . and, under the influence of favorable circumstances and beneficent social institutions, all might and would be good."[40] Characteristically, the City was pictured in general "area" terms, rather than through references to streets and addresses. Perhaps this was intentional. Had they been any more concrete, some of the writings might have served as guide books, instead of deterrents:

> It is generally known that the metropolis is the abode of a regularly organized community of thieves, who have their laws and regulations much better observed than those which the honest portion of mankind prescribe for each other. This under-ground universe has several points of contact with the other. One of these points is the gambling houses of the various parts of the City, to the number of a hundred and upward. They are of all kinds, from the palatial and splendidly furnished establishments in Broadway or Park Place, with sumptuous entertainments and costly wines, to the low, three-cent drinks and raffling-dens in the Bowery, and the negro dance-house, brothel and grogery combined, in the Five Points. In these places, the various classes of persons who pass during the day for honest people, such as leading politicians (but there is doubt as to how they pass), merchants, financiers, brokers, speculators, bank clerks, . . . down to poor desperadoes who live on almost nothing . . . .[41]

There was one reformer, so imbued with his mission, that he actually resorted to statistics in his crusade to convert the intemperate from their obvious doom:

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[38]Burdett, *The Elliott Family* (New York: E. Winchester, 1845), Preface.
[39]Burdett, *Chances and Changes* (New York: D. Appleton & Co., 1846), Preface.
[40]Burdett, *Chances and Changes,* Preface.
[41]Foster, *Celio,* pp. 88-91.

> There are at this day more than five-hundred thousand drunkards in the United States . . . . There is nothing speculative about this statement. The returns were made from actual examination by competent, respectable men. Of the crime and pauperism connected with intemperance, and sustained by the business of the distillery, I may state that out of 25,767 individuals of the poor houses and jails of the City of New York . . . 21,558 were brought there directly or indirectly from intemperance. Estimating the people of New York at one-seventh of the population of this country, we have in the United States 148,799 criminals and paupers made such by the use of ardent spirits.[42]

Novels and tales of purely *exposé* character picked up where the reform works concluded. It was their special province to reveal the lurid aspects of the "lower" City, especially in and about the Five Points, the neighborhood now known as Chinatown. From the preoccupation with the inhabitants of such charming streets as "Murderer's Alley," it would seem that this type of fiction sought to portray the "cesspool of civilization" aspect of New York. Rarely did the inhabitants of the fashionable City descend into these quarters. But quite often the denizens of the Five Points sallied forth into the "Upper" City. Sometimes these characters simply loitered on the east side of Broadway. When they were not dissipating in the grog shops or loitering in the shadows, they were planning and executing robberies, especially of the well-endowed Broadway establishments. Washington Square residences were particularly frequented by these uninvited guests. The disposal of the silver and gold services stolen from Washington Square establishments was never pictured. Perhaps that appraisal of the efficiency and organization of New York's under-world was essentially accurate. The pursuit, however, of criminals by officers of the law into the Five Points was often described:

> . . . passed down C. Street to James Street, and thence through Orange Street to that disgraceful polluting sink of iniquity, which has too long been permitted to contaminate our City, and known worldwide as the Five Points . . . entered a grocery kept there . . . where thieves, vagrants and women, sunk to the lowest depths of human degradation congregated, and poured down liquid poison from morn to

[42]George Cheever, *The Dream* (New York: none given, 1844), pp. 27-28.

> night. The bar, behind which stood a dirty, ruffian-like man in his shirt sleeves . . . saw that . . . Andrews laid down a copper on the counter, and was given in return . . . a portion of poison which . . . must have proved almost certain death to any well-regulated constitution, but which he quaffed with most evident satisfaction . . . the inmates . . . early as it was, had already thronged there in great numbers . . . .[43]

Even at its lowest levels, the City was equated with the community life of many people, at any and all hours, and in various neighborhoods.

The possibility of loneliness in the midst of the virtually constant activity and ubiquitous crowds was certainly one that did not harry the consciousness of the majority of writers. One who did render this minority view was John Treat Irving, the nephew of Washington Irving. The hero of the *Quod Correspondence,* John Quod, as created by J. T. Irving, was typical of the hero "class" of the era, in that he was a lawyer, albeit a bachelor one, respectable, and so on. But, unlike his peers, he did not try to "shield his eyes" from unpleasantries. He saw that negro beggar asleep in a doorway in Broadway. And, while making his way through that avenue, in the direction of his bachelor quarters, he passed along the fringes of a crowd. He hoped that someone would jostle him or bump into him, necessitating an apology on his part or the other party's. In either case, someone would talk to him.

The epiphanies of the John Quods shed light upon the image of New York City contained in its fiction. But, at best, it is a mosaic image. With this in mind, one can smile at the characteristic exaggeration of a literary advertisement which "puffed" Lippard's *Empire City*:

> New York is certainly the greatest city in America. It is decidedly *Metropolitan* in its character. In its streets will be discovered representatives of all the classes and races which have an existence on the American Continent, mingled with many others from the Old World. Thus, New York furnishes more abundant materials for a great book than any city in the world. It has been the author's forte in this work to picture New York: Its Aristocracy and its Dollars, not as *it seems,* but as *it really is.* He has traversed its huts and

[43]Burdett, *The Gamblers,* pp. 156-158.

palaces, and pictured its scenes by Night and Day, and delineated characters from North, South, East and West, who are lured to the great city by every motive that can sway the mind of man . . . which will . . . make it more thoroughly and earnestly read than any work of the age. All will read the work with indescribable interest . . . .[44]

[44]Lippard, *The Empire City,* title page.

THE NEGOTIATION OF INTERSTATE COMPACTS

PAUL CLINE

Interstate compacts have been negotiated in a number of ways. The Delaware River Basin Compact, approved by President Eisenhower on September 27, 1961, provides a point of focus for reviewing recent studies on interstate compacts and the considerations involved in compact provisions. A study preceding the Delaware River Basin Compact advocates the establishment of a temporary federal agency to administer the area that is the subject of the proposed agreement. This study advocates that the states involved and the federal government should establish a commission to study the problems, draft and submit for approval a federal-interstate compact creating a permanent commission to administer the area in question.[1] The temporary federal agency could render such assistance to the study and drafting commission as collecting data, conducting research studies, and giving advice. In addition, the commission should have its own small staff and budget. It should be able to employ capable consultants. Since the federal agency would provide continuous administration of the river basin (or other area), the drafting of the compact could be accomplished in a deliberate, unhurried manner.[2]

Another writer maintains that it makes little difference when and how the preliminaries of the compact are accomplished so long as the required legal steps are followed for approval of the compact. Public hearings may be scheduled and referenda held. The approval by state departments of local agreements may be necessary. Interdepartmental approval may be required where more than one state department is interested.[3]

In actual practice, the Delaware River Basin Compact was prepared by the Delaware River Basin Advisory Committee. No temporary federal agency was created as suggested by the

[1]Roscoe C. Martin, *et al., River Basin Administration and the Delaware* (Syracuse, N. Y.: Syracuse University Press, 1960), p. 358.
[2]Martin, pp. 358-59.
[3]John M. Winters, *Interstate Metropolitan Areas* (Ann Arbor: University of Michigan Law School, 1962), pp. 101-2.

Syracuse University researchers.[4] The Advisory Committee hired an attorney experienced in drafting interstate compacts. The successive drafts submitted by the lawyer were widely circulated for comment. The Committee met ten times to discuss the compact before approving it in December 1960, fourteen months after they were charged with the duty of preparing the agreement. The governors of New York, New Jersey, Pennsylvania, and Connecticut, and the mayors of New York and Philadelphia, all of whom had appointed members of the Advisory Committee, approved the compact of February 1, 1961. The Deputy Director of the federal Bureau of the Budget also approved the agreement at that time. The President signd the compact on September 27, 1961. This was a relatively short time for approval of a compact.

Drafting commissions frequently hold open meetings so that interested persons may express their views. Drafters of the Upper Colorado River Basin Compact held such meetings in four states while the Pecos River Commission held nine open meetings.

Studies likewise frequently accompany compact deliberation. The Delaware River Basin Advisory Committee had the benefit of prior studies prepared by the U. S. Army Corps of Engineers and staff members from the Maxwell School at Syracuse University. The Pecos River Commission established a five-man Engineering Advisory Committee of water experts who undertook a detailed study of the river basin and made recommendations. The Council of State Governments has shown a considerable amount of interest in the area of interstate compacts. The Council assisted in drafting the Ohio River Valley Water Sanitation Compact.

Interstate agreements creating interstate agencies tend to be the most elaborate type of compact. They usually contain such elements as:

1. Statement of motives which prompt the signatory states.
2. A definition of the purposes which the compact is to realize.
3. A description of the geographical area affected.
4. A provision for an interstate agency to administer the program called for.

[4]Martin, p. 358.

5. A provision for financing the program.
6. Provisions for ratifying, amending, enforcing, or terminating the compact.[5]

The motives, purposes, and geographical area would, of course, depend upon the nature and location of the subject matter of the compact. It is suggested, however, that definitive terms should not be used in most compacts. The reason for this suggestion, probably, is that conditions change and would render an inflexible compact archaic and difficult to administer.

Much advice has been written regarding the interstate agency created by the compact. The governing body is usually a joint board or commission with an equal number of members from each state. Alternatives to equality as a basis for membership are population and financial contributions. If either of the latter is used, each jurisdiction might be granted the veto power so that a lesser group would not be left without an effective voice in deliberations. *Ex officio* members are frequently included, such as administrative officials of interested agencies and persons with particular talents and interests.[6] Continuing administration is a "vital facet" of the interstate compact dealing with an interstate metropolitan area because the complex problems of such a locality cannot be solved in a single agreement.[7]

The compact or related legislation should provide for the responsibilities and duties of the persons in control of the interstate agency. Topics that might be covered are appointment and removal methods, length of terms, reappointment possibilities, salaries, expenses, employee benefits, powers of hiring employees, and civil service status.[8]

There should be a provision for adding new parties to the compact without renegotiating the agreement. Ways of later increasing the number of participants include annexation and making the admission subject to the approval of designated agencies or persons, or dependent upon the meeting of prescribed conditions.[9]

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[5]Richard H. Leach and Redding S. Sugg, Jr., *The Administration of Interstate Compacts* (Baton Rouge: Louisiana State University Press, 1959), p. 15.
[6]Winters, pp. 102-3.
[7]Winters, p. 101.
[8]Winters, p. 101.
[9]Winters, p. 102.

An interstate agency established by compact can usually be endowed with the same powers as any local government. Compacts should include, if applicable to the desired arrangement, the power to sue and to be sued; the power to contract, the limits on the contracting prerogative, and the method of contracting; and the power of acquiring and using property. Acquiring property by purchase, gift, bequest, devise, or eminent domain may require specific authorization. The granting of eminent domain by a state to an interstate body is a problem that may require special attention. A state agency can exercise eminent domain; finance, construct and operate public works and facilities, police these operations, and collect fees for their use to support revenue bonds; formulate or enforce regulation; and levy taxes to carry out its program. Under the holding in *West Virginia ex rel. Dyer v. Sims,* 341 U. S. 22 (1951), these powers of a state agency can be delegated to an interstate agency on the same conditions regarding the establishing of standards and the making of findings.[10]

A number of devices for restricting the actions of interstate agencies have been included in various interstate compacts.[11] These controls limit the power of the agencies and may make them more "responsible" politically. Executive controls include the prerogative of governors and the President to choose and remove agency officials. Further, the veto might be exercised by a combination of governors and the President, the President alone, or another administrative official or agency. The state and national legislatures might be given a veto over supplemental agency plans and the power to refuse reratification of short-term compacts, in addition to the ordinary legislative control over appropriations for the operation of some compact agencies.

The jurisdictions cooperating in a compact may retain the right to withdraw from the agreement by giving prescribed notice. The compact agency may be required to make available its books for inspection or an independent audit. A common pro-

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[10]Winters, p. 108, and Frederick L. Zimmerman and Mitchell Wendell, "Bridging State Lines," *National Municipal Review,* XLVI (February, 1957), 75.

[11]Zimmermann and Wendell, pp. 97-99; Winters, p. 102; and Robert W. Tobin, "The Interstate Metropolitan District and Cooperative Federalism," *Tulane Law Review,* XXXVI (December, 1961), 81-82.

vision is that no local government property may be taken without its consent. Operating procedures may be established which have the effect of restricting the compact agency's power. These procedures include a prescribed form of meeting, mandatory cooperation with other governmental bodies, and a required annual report on the need for the performance of agency functions. Some of these restrictions may be considered unnecessary, such as the reporting and inspection provisions where such requirements are part of general state law; or unduly burdensome, such as the ceiling on state appropriations for interstate agencies. A ceiling on appropriations may have the effect of placing the agency in a fiscal strait-jacket.[12]

Other possible restrictions include the liability of individual commissioners for prosecution for misdeeds; a provision that enforcement of any regulation of the interstate agency must be agreed to by a majority of the members of the board of commissioners and a majority of the commissioners from any single state affected. Three safeguards[13] would be helpful in clarifying the relationship between the compact commission and the participating states: the designation of the interstate agency as an agency of the ratifying state; the power of veto by members from a state over rules and orders affecting their state, in addition to the provision, referred to above, which is limited to enforcement; and the provision that the rules of a compact commission would not become effective within a state if disapproved by the legislature of the state within a definite period of time.

The relations between the compact agency and other agencies and jurisdictions is important to the acceptance of the compact agency by these bodies and the successful performance of the compact functions. One source indicates that the development of coordination and cooperation is much more important than the exercise of restraint upon the interstate agency.[14]

An important consideration is the relationship of the new interstate agency to an existing organization performing

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[12]Tobin, p. 82.
[13]Considered as probably unnecessary in Zimmermann and Wendell, p. 98.
[14]Leach and Sugg, p. 43.

functions in the same general area. When the Delaware River Basin Compact was being negotiated, the question arose as to the position to take with regard to the Interstate Commission on the Delaware River (Incodel), a basin-wide organization with considerable support for 25 years. Opinion varied from ignoring Incodel completely to making it the compact agency. A middle course was finally agreed to: Incodel's leaders would be consulted for advice and some of Incodel's technical personnel would be absorbed into the staff of the new commission.[15]

The Syracuse University report maintains that where the suggested water compact agency replaces a temporary federal agency, the compact agency should replace the federal body completely. The interstate group should be set up as much like the temporary organization as possible. The federal agency's functions, staff, and finances may properly be transferred completely to the newly-created commission. The report indicates that "there appear to be no constitutional, legal or administrative reasons why such a transfer of functions from an agency based principally on federal statute to one based principally on a federal-interstate compact should not take place."[16]

Positive steps for bringing the compact agency into closer contact with the federal or state governments[17] include the annual report requirement, as a means of communication, and having the same person to serve on both the compact agency and a state or local government department, thus making for a close relationship between cooperating agencies. Legislation or regulation may give other agencies the power to maintain necessary relations with the compact agency, provide for personal participation of members of legislatures and intrastate agencies in compact activities, assign legislative committees responsibility for matters related to interstate compacts, pro-

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[15]Roscoe C. Martin, *Metropolis in Transition: Local Government Adaptation to Changing Urban Needs* (Washington: Housing and Home Finance Agency, 1963), p. 124.

[16]Further study on this point is suggested by the Syracuse researchers. Martin, *et al., River Basin Administration and the Delaware*, p. 360.

[17]Leach and Sugg, pp. 15; 43-46; Winters, p. 107; and Richard H. Leach, "Interstate Authorities in the United States," *Law and Contemporary Problems*, XXVI (Autumn, 1961), 672-73.

vide for a Commission on Interstate Cooperation, as a means of communication between legislatures and interstate agencies.[18]

Financial arrangements should be clearly set out in the compact. Where the operations are to be self-supporting, the details of the self-supporting bonds and freedom from financial contribution of the participants should be included. If the participants are to contribute to the costs of construction or operations, an agreement should be included as to the extent of the obligatory and voluntary contributions of each party. Constitutional limitations on future debt, spending, and appropriations should be considered. The agreement should include, where applicable, the taxing power of the agency and whether the agency is to be immune from taxes or must make payments in lieu of taxes.[19]

Other details that may be included in the compact include provisions for ratification, amendment, and enforcement. A provision for the termination of some agreements should be included, as where the agreement is no longer useful or economical. There should be a provision for the disposition of property at the end of the effectiveness of the compact. Property may be returned to the parties or control may be returned to participants with the provision that they must maintain it, as for example, a bridge. Arbitration or judicial decision may be used as a means of determining the date of dissolution where a date cannot be fixed because of the indefiniteness of the length of operation.[20]

While interstate compacts must continue to be negotiated in a variety of ways according to the demands of the specific project, the studies here reviewed and the precedents offered by such examples as the Delaware River Basin Compact and the Upper Colorado River Basin Compact provide helpful guidelines for effective negotiation.

[18]48 states had such Commissions in 1959.
[19]Winters, pp. 105-6.
[20]Winters, p. 104.

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A REPORT OF STRING MUSIC ACTIVITY IN VIRGINIA

G. JEAN SHAW

In 1955 this writer conducted a survey of string music programs in the Virginia public schools.[2] Since then there has been increasing interest in and attention to these programs. In an effort to gauge the direction and significance of this trend, a new study was made, again through the questionnaire method, to determine the strengths, weaknesses, potential, and growth of these string activities. The investigation was extended in scope to include the college level, string players in professional and civic orchestras, amateur chamber music, and members of the American String Teachers Association. Conclusions are based on the following response (Chart 1).

CHART 1. TABULATION OF RESPONSE TO QUESTIONNAIRE

Name of Respondent	*No. of Mailouts*	*No. of Returns*	*% of Return*
School Administrators	119	90	76%
Music Supervisors	11	10	91%
Public School String Teachers			
Elementary	18	8	44%
Elem. — Jr. High	10	3	30%
Elem. — Sr. High	6	1	17%
Elem. — Jr.-Sr. High	5	4	80%
Jr. High	7	3	43%
Jr.-Sr. High	3	2	67%
Sr. High	5	1	20%
Colleges (40)	42	29	69%
Professional, Civic Orchestras			
National Symphony	22	8	36%
Marine Band (Orchestra)	1	0	0%
USAF Band (Orchestra)	5	4	80%
Norfolk	37	13	37%
Richmond	44	22	50%
Roanoke	25	17	68%
Fairfax	43	28	65%
Alexandria	25	10	40%

[1]A more detailed report on this research project, sponsored by Madison College, will be available upon request by January, 1967.

[2]G. Jean Shaw, "A Survey of the String Music Programs in the Virginia Public Schools." Master's Thesis, University of South Dakota, August, 1955.

In Virginia there are one hundred and thirty public school systems (96 county and 34 city). Of these systems, twenty-five or 19% are involved with strings.

1) Two county and eight city systems have established string programs.
2) Five systems have new programs.
3) Ten communities are interested in beginning a string program.

In 1955 there were nine systems with established string programs. As indicated by the number of teachers employed (See Chart 2), the greatest growth and expansion has been at the elementary level.

CHART 2. COMPARISON OF STRING TEACHERS EMPLOYED IN 1955 AND 1966

Grade Level of String Teachers	*No. in 1955*	*No. in 1966*	*Change*	*% of Increase Over 1955*
Elementary	8	18	+10	125%
Elem. — Jr. High	9	10	+ 1	11%
Elem. — Sr. High	3	6	+ 3	100%
Elem. — Jr.-Sr. High	3	5	+ 2	67%
Jr. High	4	7	+ 3	75%
Jr.-Sr. High	3	3	same	0%
Senior High	3	5	+ 2	67%
Unknown	5			
Total	38[3]	54	+16	42%

This change corresponds to the general education picture of teacher supply and demand (See Chart 3).

CHART 3. COMPARISON OF GENERAL AND STRING TEACHERS EMPLOYED IN THE PUBLIC SCHOOLS IN 1955 AND 1966

Category of Teachers	*No. in 1955*	*No. in 1966*	*Change*	*% of Increase Over 1955*
Total Public School Teachers (Elem., Jr., Sr. High[3]	26,933	39,442	+12,509	46%
Total String Teachers (Elem., Jr., Sr. High)	38[4]	54	+ 21	42%

From the one hundred and nineteen mailouts sent to school administrators, there were ninety (or 76%) returns. Although not all questions (up to 55%) were answered, the replies are interesting (See Chart 4). There were 31 answers (56% of the total answers) of "no" to question one, "the school system

CHART 4. TABULATION OF ANSWERS FROM THE SCHOOL ADMINISTRATORS

Question	*Yes*	*%*	*No*	*%*	*No Answer*	*%*	*Other*	*%*
1. The school system is too small to support a string program.	23	26%	31	34%	35	39%	1	1%
2. A string program is too expensive.	14	16%	19	21%	51	57%	6	7%
3. Violin is too difficult for young students	2	2%	24	27%	60	67%	4	4%
4. It takes too long to build a substantial and significant string program.	13	14%	17	19%	57	63%	3	3%
5. There is no community interest or parental support.	17	19%	16	18%	51	57%	6	7%
6. Would be interested if parents would support the program.	25	28%	10	11%	62	69%	3	3%
7. Would like to promote community support for this program.	22	24%	14	16%	52	58%	2	2%

[3]Superintendent of Instruction, *Annual Report of the Superintendent of Public Instruction of the Commonwealth of Virginia; School year of 1964-1965,* Richmond: State Board of Education, 1955, p. 388. (1965-1966 figures not available).

[4]Thirty-eight represents the actual number of string teachers. The thirty-three represents the total number of returns tabulated from the 1955 study.

is too small to support a string program," plus twelve write-ins indicating that "there are no funds, space, or personnel for a string program." This is one of the more significant reasons for no strings. The response to questions two, three, and four would tend to refute these popular reasons for not having strings. Questions five, six, and seven support the claim that parental support and community interest are important to an administration which wishes to introduce a new string program. Six additional write-ins pointed out that lack of community interest was an important reason for no strings. Seven systems indicated that:

1) There is a concentration on band.
2) Strings would be in conflict with the band program.
3) A good music program must be established before introducing strings.

In light of these reactions, it would appear that strings are:

1) A threat to the rest of the music program.
2) A non-essential part of a balanced music program.
3) A final frill for only the well-developed music program.

This represents an interesting reversal of thinking in music education. When instrumental music was first introduced into the Boston Public Schools in 1911 by Albert G. Mitchell, strings were considered to be the first essential.

Although the string programs in the public schools have had their ups and downs, there have been some recent encouragements towards expanding the string picture. The Federal Government Title III, has provided financial support and an impetus for new or expanding string programs and has been used in Virginia to subsidize them chiefly at the elementary level. The Virginia State String Orchestra (since December, 1943) and the Virginia State Music Camp Orchestra (since June, 1956) are two well-established organizations which are sponsored by the State Department of Education to encourage strings and foster communication and cooperative activity between string teachers and students. The District Festivals, sponsored by the Virginia Band and Orchestra

Directors Association (VBODA), encourage high-standard performance. A number of private organizations offer solo contests to promote interest. There are now eight community youth symphonies which either complement the public school programs or provide an orchestra in those areas which have no strings in the school systems.

With 19% of the public school systems involved with strings, the picture at the college level is similar. Inquiries were sent to forty colleges (seven additional schools had no music faculty and were not contacted). It was found that ten or 21% have employed string professors and have school orchestras. In addition, two offer string pedagogy courses, two provide private string lessons by qualified teachers in the community, and three showed an interest in offering strings in the future "when there are student interests and sufficient funds available." If these are considered, it would be a 36% string involvement.

One of the most interesting comparisons is that of the average size and range of the high school orchestras (1955 and 1966) with those in the colleges. In 1955, eight of the nine public school systems had high school orchestras with an average of forty-two musicians and a range of nine to one hundred and five players, as compared with nineteen high school orchestras (based on only nine replies) averaging twenty-five and ranging from eight to sixty. Where strings (str.) are indicated, the directors have string orchestras only. These figures would compare with the college situation of an average size of twenty-three and ranging from six to sixty (See Chart 6). This would indicate a trend towards smaller high school orchestras except that this information represents only 50% of the high school orchestras.

CHART 5. COMPARISON OF HIGH SCHOOL ENROLLMENTS 1955 AND 1966.

1955			1966		
Size of School	*Band*	*Orchestra*	*Size of School*	*Band*	*Orchestra*
1500	65	9	1400	200	8 str.
2200	80	15	1056	65	13
2010	250	27	2000	85	10
1800	50	32	1400	70	26
1200	57	40	2600	80	60
1413	42	40	1700	75	35
1860	65	43	1200	90	14 str.
1800	90	50	1700	65	47
1800	125	62	1500	130	27 str.
2200	70	105			

In every case of the 1966 tally, the band is larger than the orchestra.

CHART 6. COMPARATIVE SIZE OF COLLEGES AND ORCHESTRAS

Size of College	*No. of Music Faculty*	*No. of Music Students*	*Size of Orchestra*
711	6	110-130	6 str.
no number given	9	30	7 str.
2444	11	45	8 str.
492	11	150	10 str.
5381	15	——	18
17282	8	35	25
no number given	5	11 str.	28 (includes 10 outsiders)
1992	14	80	30
6425	15	96	49
6378	14	65	50

Considering that the colleges draw students from all Virginia communities (with their 19% string emphasis), that most high school graduates are interested in majoring in subjects other than string music in college, and that the majority of serious music students go out of the state to study at large universities or conservatories which emphasize a major in music, then perhaps this 21% string emphasis at the college level is merely a result of the system. As it is, the few teachers trained each year cannot fill the present demands. Some of these graduates are lost to Virginia when they go out of the state for jobs or for further education. The colleges

can do much to promote strings in Virginia by preparing qualified string teachers. An awareness of this responsibility and significance in training teachers is important for promoting future string growth.

A glance at the comparison of Virginia and non-Virginia institutions attended by the string teachers (See Chart 7) shows an encouraging increase in attendance in the Virginia institutions. It must be remembered, however, that this data is based on a 40% response in 1966.

CHART 7. COMPARISON OF COLLEGES AND UNIVERSITIES ATTENDED 1955 AND 1966.

	Undergraduate Schools			
	Number of Colleges		*Frequency of Mention*	
	1955	*1966*	*1955*	*1966*
Va. Colleges	4	6	6	9
Non-Va. Colleges	19	12	31	13
	Graduate Schools			
Va. Colleges	0	2	0	3
Non-Va. Colleges	11	7	16	8

The community orchestra activity generally is confined to the larger metropolitan areas. There is some exchange of personnel between neighboring symphonies. The Old Dominion Symphony Council serves as the central organization for communication between the individual symphonies, their directors, and the American Symphony Orchestra League, which serves orchestras on the national level. There are three civic orchestras and five semi-professional orchestras in Virginia. Members of two civic and three professional symphonies were contacted (because their personnel lists were readily available for this survey). In addition, the National Symphony and service orchestra members who live in Virginia were sent questionnaires. There is some interest in, and some misunderstanding and criticism of public school string activities from these various musicians. Comments such as,

> The string program in . . . at this time is deplorable . . . . Private teaching situation in . . . seems very poor . . . . We certainly need string activity in . . . have money for everything else . . . . How can we get strings in . . . we've tried for ten years . . . . We of . . . are eager to

> acquire a string program in our schools . . . . Our state is so unprogressive educationally that music training (especially strings) will be on the same level — the string majors teaching in our state are a sorry lot of performers.

give food for thought. As Paul Rolland, past president of the American String Teachers Association and the chairman of the string division of the University of Illinois states, "The public school music teacher cannot be held responsible, and should not be made the whipping boy for the current shortage of professionally trained musicians, particularly in the string area."[5] If there is so much interest in and some misunderstanding of public school string activity, then perhaps there is a genuine need for better communication in this area.

In general, the civic orchestra provides an outlet for both the non-professional and amateur musician. Membership includes:

1) high school and college students
2) amateur string players
3) military personnel
4) teachers and semi-professionals.

Members of the professional symphonies provide an untapped source of private instruction and chamber music performing groups. In addition, there are a few qualified persons who could well be recruited as public school string teachers. Some of them are highly-trained musicians but are presently teaching band or academic subjects in the classroom.

Members of the Virginia Unit of the American String Teachers Association provide an important source of private string teachers, whereas the amateur chamber music players tend to participate in informal music-making for pleasure and enjoyment and do not appear to be a source of professional players or teachers. There was some indication of professional string ensembles with two string quartets and a trio which have been sponsored by the Musicians Trust Performance Fund to play for the public schools among other performing activities. Their

[5]Paul Rolland, "Convention Reports; American String Teachers Association," *Music Educators Journal,* Washington, D. C.: MENC. October, 1966, p. 59.

availability for such performances may prove to be an important stimulus for public school programs.

Although the validity of this study is limited by the response, some interesting trends have been revealed. In general, public school string activity has kept pace with general education from the standpoint of teacher demand and employment. There is an interesting development in strings at the elementary school level, but this must become a long-term growth if its fullest potential is to be realized at all levels of higher education. There still remain the age-old questions of administrative entanglements, scheduling conflicts, and need for qualified personnel. One of the big problems between grade levels and professional areas is that of communication and centralization of interest and information. Perhaps strings need more representation with the State Board of Education.

There are encouraging signs, however, in State Department-sponsored activities, the Virginia State String Orchestra, and the Virginia State Music Camp Orchestra, in addition to the State professional music organizations, the Virginia Music Educators Association, the Virginia Music Teachers Association, and the recent organization of the Virginia state unit of the American String Teachers Association (in November, 1965), and the Old Dominion Symphony Council. There is also encouragement from federal legislation to promote the cultural arts with the Government Title III. The Ford grants to symphony orchestras have helped considerably. The Richmond Symphony was a recent recipient of one of these Ford grants. String activity certainly has become an important aspect of this cultural expansion.

Virginia appears to be ready for string growth. With increased activity in education at all levels and with a changing climate towards culture, specifically towards string progress, it is hoped that more attention will be diverted to the string programs. With increased leisure, there is more time for participation in cultural and creative activities. This changing cultural pattern suggests another justification for further string development at all levels. There is considerable untapped potential ranging from the public schools to the amateur groups, the professional performers, and the string teachers.

If there is to be growth, however, there must be an increased awareness of the facts about strings, their values and advantages, and the most effective methods for promoting such programs. By encouraging membership and participation in the state professional music organizations, and with the cooperation of administrators and educators at all levels, perhaps Virginia can enjoy the future growth in string activity which she is capable of developing.

AMBROSE HENKEL OF NEW MARKET, VIRGINIA (1786–1870), A BRIEF ANALYSIS OF HIS GERMAN PRIMERS

JOHN STEWART

The early Pennsylvania-German immigrants in the Shenandoah Valley did not seek an education for their children beyond what is today taught in the first few grades of the elementary school. Since the settlers were primarily farmers, it was deemed sufficient for their children to be able to read the Bible, to write and spell fairly well, and to do simple computations.

In order to provide materials for instruction a number of books for children were printed by the Henkel Press of New Market. The printer and author of many of these books was Ambrose Henkel. Even though many articles have been printed about the Henkel Press, Ambrose Henkel's contributions to educational literature in the German language have not been adequately recognized.[1] Henkel is often referred to as a publisher of Lutheran materials. Although the major portion of his printing activities did involve Lutheran Conference reports, church year books, song books, sermons, prayer books, and religious verses, he also printed other items such as birth and baptismal certificates, confirmation certificates, house blessings, a newspaper in the German language,[2] and broadsides.[3]

Examples of Henkel Press imprints can be found in the Archives of Duke University, The College of William and Mary, the University of Virginia, Bridgewater College, Madison College, The Rockingham County Historical Society, and the Tusing

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[1]Two of the best articles are: Albert Sydney Edmonds, "The Henkels, Early Printers in New Market, Virginia," *William and Mary College Quarterly*, Vol. 18, 2nd series (1938), pp. 174-195; and Paul Fischer, "The Henkel Press, A Factor in Early Education in Virginia," *The American-German Review*, Vol. 7, No. 6 (1941), pp. 30-34.

[2]*Der Virginische Volksberichter und Neumarketer Wochenschrift*, Dec. 16, 1807 - June 14, 1809, New Market, Va. (Duke University and The Rockingham Historical Society have almost complete files.)

[3]Klaus G. Wust, "German Printing in Virginia, A Checklist, 1789-1834," *Society for the History of the Germans in Maryland*, 28th Report (1955), pp. 54-66 and Lester J. Cappon and Ira V. Brown, "New Market, Virginia, Imprints 1806-1876," (Charlottesville, 1942).

family collection in New Market.[4] It is disappointing that there is no one complete collection of all the items printed. Equally regrettable is the fact that neither Cornelius J. Heatwole in his *History of Education in Virginia* nor J. L. Blair Buck in *The Development of Public Schools in Virginia, 1607-1952*, makes any mention of Henkel Press publications as far as their educational significance is concerned. The whole subject of early educational activities in the Shenandoah Valley needs to be explored in the total perspective of education in Virginia in the years following the War of Independence.

Ambrose Henkel, son of Paul Henkel, a distinguished Lutheran minister and the founder of the Henkel Press, was born in Shenandoah County, Virginia, in 1786. When he was twenty years old, he accompanied his father and his brother Salomon, a self-made physician and apothecary, to the print shop of John Gruber at Hagerstown, Maryland. In 1807 he worked as apprentice for Starck and Lang in Hanover, Pennsylvania. From the latter part of 1807 until October, 1809, he remained in New Market to take care of his father's shop. During the latter part of 1809 he worked for John Gruber in Hagerstown and at Gleiner's on Charles Street in Baltimore. He also worked in a Philadelphia print shop during part of 1810. The next two years were spent in New Market. In 1812, he married Catherine Moore, and the couple moved to North Carolina. Upon his return in 1814, he held the position of postmaster of New Market but contributed his services to the Henkel Press. Ownership of the press had been transferred to Salomon Henkel after 1819. From 1824, the year Ambrose was ordained minister in Koiner's Church near Waynesboro, until 1870 he served a number of Lutheran congregations in Rockingham and Shenandoah Counties.

Ambrose Henkel is the author of four ABC Books and the printer of the five Virginia Children's books in the German language, here listed in chronological order:

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[4]A large number of Henkel Press broadsides, birth and baptismal certificates, confirmation certificates and selected pages from publications, including ABC Books, have been photographed and are contained in the writer's collection and annotated checklist of "Documents and Folk Art of the Pennsylvania Germans of the Shenandoah Valley." Grants made by Madison College through the Committee on Research and Other Studies made this collection possible.

Das erste Virginische Kinderbuch: Die frommen Zwillinge, eine Geschichte von Zwei Christenknaben die von einem Juden in der Türkei verkauft wurden und wunderbarlich mit ihrem Vater vom Tode errettet wurden, 1807.

Das zweite Virginische Kinderbuch: Die Unterredung über die Feiertage eines Schullehrers und seiner Kinder, 1807.

Das erste ganz neue Virginische ABC und Namens Büchlein für Kinder, 1808.

Das dritte Virginische Kinderbuch: Ein Christtagsgeschenk für kleine Knaben oder eine Sammlung von verschiedentlichen Unterredungen, 1809.

Das vierte Virginische Kinderbuch: Ein Christtagsgeschenk für kleine Mädchen oder eine Sammlung von verschiedenen Unterredungen, 1809.

Das neue Allgemeine Hoch-Deutsche ABC und Namens-Buch, für Kinder, welche anfangen zu lernen, mit vielen Kupferstichen, schön ausgeziert, 1810.

Das fuenfte Virginische Kinderbuch: Das Neujahrsgeschenk, 1911.

Das kleine ABC-Buch, oder Erste Anfangs-Büchlein, mit schönen Bildern und deren Namen, nach dem ABC, um den Kindern das Buchstabiren leichter zu machen, 1817. (Second edition 1819; third edition, 1820).

Das grosse ABC Buch. Enthaltend: Das ABC, Wurzelwörter, und Wurzelwörter mit ihren angehängten Ableitungssylben. Nebst vielen Arten Buchstabier = und Leseübungen, 1817. (Second edition, 1820).

ABC-und Bilder Buch, ABC and picture book, 1817 (In German and English. No author mentioned).

The Kinderbücher contain simple stories with moral admonitions against certain evils which must have been prevalent among adults and which children were apt to imitate, such as neglecting the church; the first Kinderbuch, for example, tells the story of the twins Timonides and Filon who lived with their pious parents "in a town near the borders of the Turkish dominions." The boys disappeared but were miraculously saved from certain death after having been sold to the Turks as slaves. The reader is told at the end of the story: "Here you see what it is to have a true and living faith in the promises of God's holy Word" and "be careful to have your children instructed in the blessed Word of God." Other evils which must have been common were swearing, cruelty to animals, and — drinking!

While the children's books provided moral encouragement, the ABC Books were intended to help parents and teachers instruct children in the fundamentals of reading, writing, arithmetic, and geography. Most important to Henkel was the need to promote the German language. In the foreword to the first ABC Book, published in 1808, the author stresses the fact that many English children have the opportunity to avail themselves of picture books with fitting rhymes. "Man hat es daher für gut angesehen auch solche unter die deutsche Kinder zu bringen, in der Hoffnung es werde Dergleichen auch bey ihnen, und unsere deutsche Sprach dadurch befördert werden mag. . .Genug den Kindern einen Anfang zum Schulunterricht zu geben."

Das große

ABC-Buch.

Enthaltend:

Das ABC, Wurzelwörter, und Wurzelwörter mit ihren angehängten Ableitungssylben.

Nebst

vielen Arten Buchstabier- und Leseübungen, &c.

Von Ambrosius Henkel.

Zweite Auflage.

Neu-Market:
Schenandoah Caunty, Virginien.
Gedruckt in Salomon Henkel's Druckeren, bey J. H. Lawtoh.
1820.

The first ABC Book contains one page of the entire alphabet; a page with syllables of two letters; twenty-four pages of letters of the alphabet with pictures; one page of a morning song; an evening song and the Ten Commandments. The twenty-four woodcuts illustrating the letters of the alphabet are supplemented by an appropriate poem and followed by a maxim, such as the following under the letter "M":

Maus du kommst aus deiner Hohl
Und schleichst nach dem Sack von Mehl,
Gib aber acht wag nicht zu weit,
Hör wie die Katz vor Hunger schreyt,
Erhascht sie dich, sie frisst dich ganz,
Von dir bleibt weder Kopf noch Schwanz.

Lass dich nicht frey nicht sicher aus,
Sonst kann dirs gehen wie die Maus.

(Mouse, you come out of your hole
And you sneak to a bag of flour,
But watch out, don't dare to go too far,
Listen how the cat cries of hunger,
If she catches you, she will eat you completely,
Nothing is going to remain of you, neither head nor tail.
Don't ever feel free or secure
Otherwise the same will happen to you
As happened to the mouse.)

The second ABC Book differs greatly from the first ABC Book. It not only contains thirty-six pages as compared to thirty-two but comprises additional learning materials, such as: arithmetic, geography and rules of conduct.

The author uses an interesting approach to language learning. He starts the book with a new set of woodcuts depicting animals to illustrate the letters of the alphabet. This is followed by the alphabet without pictures, vowels, consonants, and diphthongs. After a few exercises in recognizing letters, words with from two to seven syllables are introduced and followed by separate exercises for words with accents on the first and then the second syllable. The words used are simple ones taken from everyday life and from prayer books. Many of the words can be found again in the prayers and songs contained in the book. After the student has mastered the fundamentals of spelling and simple reading, geographical terms are introduced.

As a review of the alphabet, combined with vocabulary learning, poetry, and inspirational readings, he continues with pages of woodcuts used in the first ABC Book. These are followed by twenty-five sayings from the Bible according to the ABC, each letter containing two verses, such as the following under the letters "A" and "B":

Alle die gottseelig leben wollen in
Christo Jesu müssen Verfolgung leiden.
Alles was ihr wollet das euch die
Leute thun sollen, das thut ihr ihnen.

Befiehl dem Herrn deine Wege und
Hoffe auf ihn. Er wird es wohl machen.
Bleib fromm und halte dich recht; dann
Solchen wirds zuletzt wohl gehen.

(All those who desire to live piously
According to Jesus Christ must suffer persecution.
Whatever you want people should
do for you, you should do for them.

Command the Lord your ways and
Set your hopes upon Him. He will do it well.
Remain pious and keep on the right path;
Then, at the end, you will be blessed.)

The book continues with three pages of instructions as to how children should behave at home before going to school, on their way to school, at school, and on their way home. For example, once the "scholar" reaches home, he is supposed to greet his parents.

Wird dir der Vater was von Arbeit zugesellen
So thu es alsbald, ohn alles widerbellen!
Befiehlt die Mutter was, so plaudre nicht
Auch gegen diese muss ein Schüler höflich sein.

(Whenever your father wants you to do some work with him
Do it right away, without any rude reply!
Whenever your mother orders you to do something, don't talk.
To her, too, a student must be polite.)

The last two pages of the book contain instructions about punctuation, explanations of abbreviations, numbers and simple arithmetic exercises. The explanation of punctuation is simple and easy to understand. "A comma means that you should

stop for a very brief time in what you are trying to say — as if you would silently say *ein* in German. Thus, you know that the sentence will continue. A semicolon means a somewhat longer pause, a colon still longer, and a period the longest pause." Among the abbreviations we find *D* for *Doctor, Fr.* for *Frage oder Freund, Mr.* for *Meister, P* for *Pfund oder pens, UDG for und dergleiche; se für seiner.*

The second ABC Book, *Das Allgemeine Hochdeutche ABC Buch* shows the craftsmanship of its author, Ambrose Henkel. It is a comprehensive book, more carefully constructed and showing more pedagogical insight than the first book. It must have served its purpose well as a book in high German for dialect speakers to become acquainted with the printed language.

Among the three ABC Books which were published in 1817, *Das Grosse ABC Buch* is by far the most important. *Das Kleine ABC Buch oder Erste Anfangs-Büchlein* is a mere twenty-nine page condensation of *Das Grosse ABC Buch,* while *Das ABC und Bilder Buch* presents a brief sixteen-page edition of the alphabet, in both German script and English print. Woodcuts are included as well as some written materials, in both English and German.

Das Grosse ABC Buch consists of ninety-two pages. A completely new approach for the teaching of German is used by the author. Rather than using letters and syllables as the only elements of structure, the *Wurzelwort* (stem) is added as well as the fundamentals of grammar.

Four ways are used to teach the alphabet: first, in the usual order, A, B, C, D; second, forms of German script letters are compared in their respective relationships such as I - J - R - X - C - E, N - U - Ü, M - W, etc.; third, letters are grouped according to similar sounds in German pronunciation such as: A - H - K, F - L - S, etc.; fourth, letters are printed accompanied by woodcuts depicting familiar objects such as: A a—Aff, B b—Bull, C c—Christ, etc.

The next unit consists of groups of monosyllabic words divided into nouns, pronouns, adjectives, prepositions, conjunctions, and interjections. Definitions of each grammatical

term introduce most groups of words. The definitions are brief and easy to understand; both the Latin and the German terms are used, such as *Conjunctiones—Bindewörter, Interjectiones—Empfindungswörter.* Among the interjections we find such words as *Ey! Hop! Huy! Potz!* Verbs and adverbs are placed at the end of the following unit, after the concept of *Wurzelwort* (stem) has been introduced.

The student should now be ready to learn duosyllabic and longer words. The next twenty-six pages are devoted to the main thesis of the book, *Wurzelwörter* and *Ableitungssylben.* The latter are defined as "Sylben die vornen und hinten an ein Wurzelwort gehängt werden und mit demselben ein längeres Wort formiren." *Wurzelwörter* "sind solche Wörter die nicht verkleinert werden können, und man Vor—und Nachsylben anhängen kann." Thus, long words, according to the author, can be combinations of stems with prefixes and/or suffixes as well as combinations of stems.

Thirty prefixes and forty-two suffixes introduce the list of words, beginning with the stems, *Arg-, Art-, Aug-, Bann-, Bau-,* etc. and ending with *Zoll-.* Under the stem *Zoll* we find for example such words as: *Zoll-bar, Zoll-frey, Zoll-zet-tel!* and *Zoll-ein-nehm-er!* The author is this time concerned only with proving that a great number of words can be constructed by adding syllables to stems. The occasional odd combinations of pseudo-syllables and stems should not detract from this inherently sound approach.

There is an additional treat for the learner on these twenty-nine pages dealing with stems. He has an opportunity to read simple sentences, new verbs, poems, and short passages from the Bible. The author does not use words at random but selects them carefully according to certain topics, such as: animals, the five senses, the activities of men, feelings and emotions, the four seasons, directions, etc. The last two pages even contain recipes: "Hast du Unglück dich zu verbrennen. . . ." and "Fleisch einzusalzen."

The author continues with a list of words "Die beynahe gleichen Laut aber verschiedene Bedeutung haben," words which sound alike but which have different meaning, such as *aal-ahl, ahnden-ahnen, arm-arme-aerme-armee,* etc. Each word

is explained in German so that the student can learn how to define words. We must also assume that the teacher pronounced the words so that the students could listen to the differences of sound.

A similar method is found in the next eight pages which contain a list of words of French and Latin origin commonly in use in German in "speaking, writing, newspapers and other writings."

Next, we find a list of the most common first names of "Manns-und Weibspersonnen," a list of the books of the Old and New Testaments, an explanation of a few abbreviations, and a page of numbers.

The author presumes that the students are now ready to start writing. He devotes three pages to an introduction to writing: "Von einigen zur Schreiberey erforderlichen Anmerkungen" (A Few Observations Regarding Penmanship).

The author gives some good advice about spelling. In the first paragraph of the unit dealing with this subject, he states: "Listen carefully and watch how educated men deliver their sermons in church and how they express themselves in writing in their books." He knows very well that there is a distinction between the spoken and written languages. He also realizes the difficulties his students encounter in differentiating between English and German sounds.

The author does not state spelling rules without illustrating them with appropriate sentences. The examples of possible interference are taken from Biblical literature and everyday expressions. German students of today still have difficulties with some of the words which plagued their predecessors during the time of Ambrose Henkel, as for example: *vor—für, für mir—für mich, für ihm—für ihn, vor mich—vor mir, Meser—Messer, sind—sein (seyn), das—dass, denn—dann, Mann—Man,* etc. Students are warned of wrong spelling of derivations of root words, such as: *Vater—Vehterlich, Gott—gettlich, Bruder—briderlich,* etc. The student is told: "Write the derivative as you write the root word." The pages on the subject of punctuation conclude the chapter on spelling. Each punctuation sign is introduced by a definition and followed by examples as

for instance: "A period is placed where something has been said which can be understood by itself without adding any explanations. Example: 'Whoever has pity for a poor man honors his creator and this is the way by which God shows him His salvation.' All words are capitalized following a period. When you read, stop after a period, then count until four before you continue with the next sentence. In case of a colon, count to three, semicolon to two and comma stop and say one'." After a question mark the reader is admonished to count to four. At an exclamation mark "raise the voice and stop a little longer than you would do after a period. . . .A parenthesis should be read faster and not so loud as the rest of the sentence."

The last eighteen pages contain reading selections dealing with prayers for various occasions, poems, verses from the Bible, and a story "Cruelty Against Animals."

As a woodcut and a poem on the front page admonish the student to learn the alphabet to be able to read, a concluding poem on the back page states:

> Lass mein Kind, den Hahnen dich
> Früh aufwecken williglick.
> Kleid dich, wasch dich, kamm dich, bet',
> Und alsdann zur Schul hintret',
> Lern erkennen dich und Gott,
> Willst du seyn geschickt zum Tod.
>
> (My child, let the rooster
> Wake you up early and with good cheer.
> Get dressed, wash, brush your hair, pray,
> And then go to school,
> Learn to know yourself and God,
> If you want to be reconciled with death.)

Ambrose Henkel demonstrates a remarkable insight in language learning in his magnum opus *Das Grosse ABC Buch.* His prime objective of teaching students to be able to speak, read, and write high German is developed through carefully planned stages. The modern concept of language learning—understand before you speak, speak before you read, and read before you write—is generally followed by the author. There is a somewhat crude progression from phonetics (syllables), to morphology (stem words) and to syntax (grammar).

In the teaching of sounds he uses not only audio-visual materials (woodcuts) but phonemic contrasts. The fact that the printed pages were in front of the student and the alphabet studied as a basis of sounds should not disturb the modern language teacher of today!

Words are made up of parts of words such as suffixes, prefixes, and stems. The author is rather careless in his distinctions of roots, inflectional roots, and derivational roots, but it must be kept in mind that it was his purpose to teach the largest number of words derived from a limited number of roots. Any reference to the concept of morphemes is merely coincidental!

Syntax is taught by means of grammatical explanation of terms and examples of the use of words in phrases and sentences. These are simple and taken from sources which must have been known to the student.

There are constant references to possible difficulties in pronouncing and writing German and English. The author is well aware of the fact of interference. He knows of the influence of the spoken language, both English and the Pennsylvania-German dialect. The concepts of intonation and juncture are casually touched upon in the chapter on punctuation to help students in reading aloud rather than for speaking purposes.

The two sections in the book concerning vocabulary building other than by root words are interesting insofar as they deal with two levels of vocabulary. The unit on "Words which sound alike but have different meaning" contains vocabulary for communication within the environment of the student. "Words derived from French and Latin" are on a more advanced level.

According to modern linguistic theory, the section on writing should follow the one on reading. Although Ambrose Henkel has a chapter on each, he puts them in reverse order.

The author follows sound contemporary practices in his teaching of reading. The student starts with prereading instructions, the identification of written symbols. He then learns to identify the symbols with the language spoken at home, the dialect, and probably some English. The next step is to

learn to read what he has heard at home or in the classroom. The two samples of recipes in this section constitute a step of diversification. The last step, literature on the level of the child, is contained in the last part of the book. In this section we find a variety of materials. All of the readings are concerned with enriching the cultural background of the child. They teach moral values through the different types of literature. Here again the author shows a good understanding of the learning process. He uses stories, poems, prayers, and even a choral selection. The variety of approaches and the topics selected should have helped the child to see the relevance of his newly acquired reading knowledge in relation to the culture of which he is a part.

It must be understood that the ABC Books were written for children whose parents were often bilingual on the oral level. Most of the parents spoke only the dialect, the language spoken at home. It is not probable that they could read high German. Thus, the ABC Books helped the student to unlearn what he already knew orally and to teach him instead to speak, read, and write in high German. A rather formidable task! Ambrose Henkel tried to solve the problems involved in teaching high German through apparently primitive methods. A closer look at his *Grosse ABC Buch* should convince us, however, that the author deserves considerate respect. What he has to say is crudely expressed but never entirely wrong when understood in contemporary terminology. Furthermore, some materials used by Ambrose Henkel appeared in similar publications in Pennsylvania.

The hope of teaching high German to the younger generation of Pennsylvania Germans in the Shenandoah Valley could not, however, be fulfilled. There is no evidence that Ambrose Henkel used his own books in his teaching activities as Lutheran minister. The interesting fact remains that an attempt was made by the Henkel Press to revitalize the use of high German. The attempt failed. By mid-century, English supplanted German and a hundred years later it almost crowded out the dialect, although even today some elderly people use "the Dutch." Ambrose Henkel's books remain rare and valuable collectors' items.

THE SCHOLASTIC APTITUDE OF VIRGINIA HIGH SCHOOL GRADUATES BEING ATTRACTED TO TEACHER EDUCATION PROGRAMS

CHARLES W. BLAIR

Instructional programs which seek to meet the needs of children and youth in twentieth-century America must cope with educational problems of a size and a degree heretofore unknown in American education. Society has instituted programs of teacher education as one means of securing competent teachers to devise and maintain instructional programs commensurate to the current challenge.

The success of teacher education programs would seem to be at least partially dependent upon the degree of scholastic aptitude possessed by the individuals enrolled in them. Paul Woodring, noted educator and former consultant to the Fund for the Advancement of Education, has urged that effort be made to recruit persons of high intellectual caliber for the teaching profession. Woodring also stated that the desirability of other traits in those who would enter teaching careers should not be allowed to obscure the need for persons of high intellectual caliber.[1] Robert D. North, in a paper presented at the Thirteenth Annual National Conference of the National Commission on Teacher Education and Professional Standards also recognized the need to attract persons with high academic ability to teaching careers and pointed out the value of information concerning the relative scholastic ability of students being attracted to teacher education programs.[2]

Various investigations conducted during the past several decades have indicated that students enrolled in programs of teacher education have tended to possess measured scholastic ability inferior to that possessed by college students in general.

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[1]Paul Woodring, *A Fourth of a Nation* (New York: McGraw Hill Book Company, 1957), p. 240.

[2]Robert D. North, "The Teacher Education Student: How Does He Compare Academically with other College Students?" *The Education of Teachers: New Perspectives* (Washington, D. C.: National Commission on Teacher Education and Professional Standards, National Education Association, 1958), pp. 278-295.

Therefore, concern about improving the scholastic quality of students enrolling in teacher education programs has been prominent in many discussions of teacher education.

In spite of the above noted concern about the relative scholastic ability of prospective teachers, a search of available literature revealed no research findings which would indicate the relative scholastic ability of Virginia high school graduates who enter college and who plan to become teachers. Undoubtedly, the past efforts of dedicated educators have succeeded in attracting more capable Virginia youth to teaching careers. However, the lack of previous research prohibits the formulation of more definitive statements concerning the relative success of these recruitment efforts in Virginia.

The discussion to follow will relate some recent research findings which give some indication of the relative scholastic ability of Virginia high school graduates who plan to become teachers. These findings were the result of a larger study which was undertaken to explore possible ways of securing more scholastically capable recruits for the teaching profession.

The research reported herein sought to determine the relative scholastic aptitude of 1963 graduates of selected Virginia public secondary schools who entered college and who planned to become teachers. Scholastic aptitude was estimated in this study from the scores earned on the *Cooperative School and College Ability Test, Forms 2A and 2B.*[3] College-attending graduates were 1963 graduates of predominantly white Virginia high schools who were listed by high school principals as attending four-year colleges or junior colleges. Graduates planning to become teachers were those college-attending graduates who indicated on a questionnaire that they planned to become teachers after completing college.

Since it was impractical to study the entire population of 27,793 graduates, the drawing of a 20 per cent representative sample of 1963 graduates of predominantly white accredited secondary schools in the State of Virginia was undertaken. The 1963 graduating classes of 51 high schools were included in the

[3]Cooperative Test Division, Educational Testing Service, *Cooperative School and College Ability Tests, Forms 2A and 2B,* (Princeton, New Jersey: Educational Testing Service, 1956).

sample. The 5,578 graduates in the sample were representative of all 1963 graduates of predominantly white high schools in the State of Virginia in terms of (1) geographic location of graduating high school, (2) size of enrollment of graduating high school, and (3) the rural-urban nature of the general population served by the school division in which the graduating high school was located.

Data concerning the sample were secured from three sources. Scores earned on the *Cooperative School and College Ability Test* were secured from the State Department of Education. Indications of college attendance and addresses of graduates were secured from high school principals. The vocational plans of graduates were inferred from responses contained in questionnaires sent to each college-attending high school graduate.

The relative scholastic aptitude of prospective teachers was determined by comparing the scholastic aptitude test scores of college-attending graduates who were planning to become teachers with similar scores earned by college-attending graduates who were not planning to become teachers. The comparison of scores earned by the teaching and nonteaching groups considered both the means and distributions of scores. Null hypotheses, which stated that there was no significant difference between the means of scores being compared, were tested by the critical ratio method for testing differences between means. A two-tailed test of significance was employed and the significance level was established at the .01 level. The distributions of scores for the groups were divided into four categories in terms of four arbitrarily selected percentile ranks. Chi-square as designed for use in the comparison of two groups was employed to test null hyphotheses concerning the distributions of scores.

Scholastic aptitude test scores and indications of college attendance were secured for 4,447 or 81 percent of the 5,578 graduates in the sample. After this loss of data the remaining sample differed significantly from the population in terms of factors used in sample selection. However, in no case did these differences involve more than 5 per cent of the graduates in the sample.

High school principals indicated that 1,960 of the 4,447 graduates were enrolled in college in September of 1963. Sixty per cent or 1,184 college-attending graduates returned the questionnaires which were mailed to them.

The above data indicated that complete information concerning the entire sample was not secured. The effect of this failure to secure complete information upon the objectives of the study remained undetermined.

Four hundred of the 1,184 college-attending graduates who returned the questionnaires indicated that they planned to become teachers. Sixty-three of the prospective teachers were male graduates. Seven hundred eighty-four of the college-attending graduates were planning nonteaching careers. Four hundred and sixty-three of those graduates planning nonteaching careers were male graduates.

When the scholastic aptitude test scores for the teaching and nonteaching groups were compared the following results were obtained.

1. The mean of scholastic aptitude test scores for high school graduates planning to become teachers was significantly lower than the mean of scores for high school graduates who entered college and who planned nonteaching careers. Similar findings were obtained in separate comparisons of both male and female graduates in the teaching and nonteaching groups.
2. The distribution of scores for the teaching and nonteaching groups differed significantly. Major differences between the distributions were the higher proportion of college-attending graduates planning to become teachers who scored below the fiftieth percentile and the higher proportion of college-attending graduates who planned nonteaching careers who scored at or above the ninetieth percentile.
3. Forty-five per cent of the college-attending graduates who scored below the fiftieth percentile planned to become teachers while only 28 per cent of those who scored at or above the ninetieth percentile had similar vocational plans.

Other findings which might be of interest to teacher educators but which were not directly related to the objectives of the study included the following:

1. Comparison of scores earned by graduates planning to teach in secondary schools and graduates planning to teach in elementary schools indicated no significant differences in either means or distribution of scores.

2. The means of scholastic aptitude test scores earned by male graduates planning to become teachers did not differ significantly from the means of scores for female graduates who planned to enter teaching. However, the distribution of scores for male and female prospective teachers did differ significantly. The major difference between the distributions of scores was the larger proportion of male graduates planning to become teachers who scored below the fiftieth percentile.

3. Estimates of family income level given by graduates planning to become teachers tended to be lower than similar estimates given by graduates planning to enter nonteaching vocations. Fifty per cent of the prospective teachers estimated their family income levels to be below $7,500 while only 34 per cent of the graduates planning not to teach made similar estimations.

The findings of this study tended to agree with previous research which indicated that individuals attending college to prepare for teaching careers tended to possess scholastic ability inferior to that possessed by individuals planning to enter fields other than teaching after campleting college. In addition this study supplied data concerning the scholastic aptitude of graduates of Virginia high schools who were attracted to teacher education programs.

The findings of this investigation indicated that programs of teacher education do not compete successfully with other fields in the recruitment of capable high school graduates. Consideration of the importance accorded programs of teacher education suggests that continued attention should be given to efforts to recruit more capable youth for teacher education programs.

As would be expected, numerous proposals have been made as to how the scholastic quality of prospective teachers might be improved. Establishment of higher admission requirements for teacher education programs, increased economic reward for teachers, revision of teacher education programs, and recruitment of capable noncollege-attending youths are several of the more frequently mentioned approaches to the problem.

However, an even more fundamental challenge confronts the teacher educator who is concerned with the scholastic abilities of those to be educated to become teachers. Not only must he seek to recruit capable youths for teacher education programs but he must also acquire a more definitive understanding of the relationship of scholastic ability to the objectives of the teacher education programs and to the performance of the teaching task.

A COMPARATIVE STUDY OF THE VERGILIAN AND DANTESQUE TOPOGRAPHY OF THE *INFERNO* AND *PURGATORIO*

BESSIE R. SAWHILL

The greatest production of Dante's genius, like that of Vergil's, traces the mystic journey of a living soul through the realms of the dead. The theme is one which has possessed great interest among people of all times. This fact is attested by the diversity in nationality and in period of time as well as by the extraordinary fame attained by the four great writers who have adopted such a theme. Homer, Vergil, Dante, and Milton are names familiar to all.

Vergil, in the sixth book of the *Aeneid,* and Dante, in the *Divine Comedy,* have chosen a common subject. Since Vergil was one of the greatest poets of antiquity as well as Dante's favorite author, it is but natural that Vergil should have been Dante's chief literary model as he was his guide through the region of shades. We can gain a more precise idea of the affection and reverence which binds these two great poetic countrymen by noticing the part which Vergil plays in the *Divine Comedy.* There, Vergil is human wisdom in the broadest sense.[1] He opens men's eyes to the glories of the visible and the truth of the invisible, and to Italians he is a definite embodiment of these qualities. Williams[2] points out that the entire work of Dante is a description of the great act of knowledge, in which Dante is the Knower, God is the Known, and Beatrice is the Knowing. Vergil, he thinks, could be called a lesser master of knowing — but lesser only in comparison to Beatrice, who serves as the embodiment of Christian knowledge, which the pagan poet was unable to attain.

The purpose of this study is to point out in detail the points of resemblance and difference in the topographical aspects of

[1]Charles A. Dinsmore, *Aids to the Study of Dante,* New York, Houghton, Mifflin and Co., 1903, 380.

[2]Charles Williams, "The Recollection of the Way," in *Dante: A Collection of Critical Essays,* ed. by John Freccero, Englewood Cliffs, New Jersey, Prentice-Hall, 1965, 176.

the Vergilian Hades as portrayed in the sixth book of the *Aeneid* and the Dantesque conception as set forth in the *Inferno* and *Purgatorio.*

(a) The *Inferno*

The compression of the pictorial composition of the sixth *Aeneid* shows how absurd it would be to attempt to construct as rigid and detailed a topographical scheme for the *Aeneid* as for the *Divine Comedy.* Grandgent,[3] in referring to the latter, declares that in spite of its bewildering and multifarious details it is as sharply planned as a Gothic cathedral, while Dinsmore[4] compares its structure to that of a delicate watch. Although the infernal topography of the *Aeneid* is somewhat confused, the essential characteristics can be recognized, and its broad outlines can be determined.

Norden[5] makes the following general divisions:

(1) Region between the upper world and Acheron (vss. 268-416).
(2) Region between Acheron and Tartarus-Elysium (vss. 417-547).
(3) Tartarus (vss. 548-627).
(4) Palace of the ruling pair of the underworld (vss. 628-636).
(5) Elysium (vss. 637-678).
(6) The Grove of Lethe (vss. 679-887).

In Vergil the earth is the center of the universe. But the journey of souls in a well enclosed world could no longer be maintained in Dante's time. He makes Tartarus a chasm bored through the earth with two antipodally placed openings. This conception, unique in Greek mythology and appearing in the *Phaedo* of Plato, is in no way countenanced by Vergil.

Norden[6] divides Vergil's entrance to Hades into three parts:

(a) The beginning of the journey (vss. 268-72).

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[3]*Cf.* C. H. Grandgent, *La Divina Commedia,* Boston, D. C. Heath and Co., 1913, 31.
[4]*Cf.* Charles A. Dinsmore, *The Teachings of Dante,* Boston, 1901, 40.
[5]Eduard P. Norden, *P. Vergilius Maro, Aeneis Buch VI,* Leipzig, B. G. Teubner, 1916, 208.
[6]Norden, 210.

(b) The enumeration of monsters (vss. 273-89).

(c) Aeneas' meeting with them (vss. 290-94).

Also three episodes take place in the region about Acheron:[7]

(a) The meeting with Charon (vss. 295-332).

(b) The meeting with Palinurus (vss. 333-383).

(c) The passing over Acheron (vss. 383-416).

Similarly, in the *Divine Comedy,* Dante at the beginning of the journey meets with dreadful beasts. In his case it is only a lion, a leopard, and a wolf,[8] while Aeneas and the Sibyl encounter the Centaurs, double-formed Scyllas, hundred-handed Briareus, the monstrous hissing snake of Lerna, the Chimaera armed with flames, Gorgons, Harpies, and three-formed Geryon.[9] In the *Divine Comedy,* as in the *Aeneid,* Acheron must be crossed before the first circle of Hell is entered. The ancient "portitor" of classical mythology has been retained, but like most of the classical guardians retained in Dante's Hell he has become a demoniac figure; his fiery eyes have become encircled with wheels of flame.[10] The eagerness of the shades to be ferried across Acheron is common to both authors.[11] As Charon orders Aeneas to stay his steps, so in the *Inferno* the Centaurs are about to draw their bows on Dante and Vergil when they are descending the slope of the seventh circle.[12] Both mention the assault of Theseus.[13]

In the region between Acheron and Tartarus-Elysium, Aeneas and the Sibyl meet Cerberus, who guards the gates of the lower world, while in the *Inferno* he has become the tormenting genius of the third circle. This beast opposing the poet's passage is offered a double handful of mud, which he eagerly devours. So in the *Aeneid,*[14] Cerberus is pacified by the Sibyl

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[7]Norden, 219.

[8]Dante (*Inferno XII,* 55) does place centaurs to guard the foot of the bank in the seventh circle.

[9]*Aeneid VI,* 286-89.

[10]Charles Eliot Norton, *The Divine Comedy of Dante Alighieri,* tr. from the Italian, New York, Houghton, Mifflin Co., 1941, *Inferno III,* 97. All references to the *Divine Comedy* are taken from this edition.

[11]*Aeneid VI,* 318-19; *Inferno III,* 72.

[12]*Aeneid VI,* 389-90; *Inferno XII,* 63.

[13]*Aeneid VI,* 392-99; *Inferno IX,* 5. *Cf. Inferno IX,* 99.

[14]*Aeneid VI,* 17-23.

by a honey-cake. In Dante, Cerberus is symbolic of gluttony.[15] The substitution of dirt for medicated sweets serves still further to debase the greediness of this region.[16] Minos holds in both the *Aeneid* and the *Odyssey* the noble office of judge of the dead. In the *Aeneid,* however, he is placed in an intermediate locality between Acheron and inner Hades and seems to judge only the following groups of shades:

(1) The *aōroi,* or untimely dead (vss. 426-29).
(2) The *biaioithanatoi,* or those who died by violence (vss. 430-95).
    (a) The *dia krisin tethnēkontes,* or the executed (vss. 430-33).
    (b) The *auto cheires,* or suicides (vss. 434-39).
    (c) The *hyp' erōtos tethnēkontes,* or victims of love (vss. 440-76).
    (d) The *polemountes,* or warriors (vss. 477-93).[17]

Minos is chiefly remarkable as belonging to a period when history and mythology interlace, and as uniting in his person the chief characteristics of each. He is the type of the ancient legislator who brings to men not elaborate rules formed by human wisdom but revelations from on high.[18] Every nine years he held conferences with Zeus and drew up laws which were the commandments of God.[19] His office in the lower world was a reward for his just and mild rule on earth. Since Minos was traditionally the judge of all the dead, his office in the *Aeneid* is inappropriate. Butler[20] suggests that Minos merely allots a dwelling place, while Rhadamanthus assigns punishment for sin. In Dante he has become a hideous demon in the second circle, the symbol of the guilty conscience, it would seem, or the sinner's disordered and terrified conception of divine justice.[21]

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[15]Francisco Flamini, *Introduction to the Study of the Divine Comedy,* tr. by Freeman M. Josselyn, New York, Ginn and Co., 1910, 72.
[16]Grandgent, 18.
[17]Norden, xiv.
[18]Bouché-Le Clercq, *Histoire de la Divination dans l'Antiquité,* Paris, E. Leroux, 1879, I, 97.
[19]A. Meineke, *Strabo, Geographica,* Leipzig, B. G. Teubner, 1866-77, X, 4, 8; XVI, 2, 38; *cf.* Carolus Halm, *Valerius Maximus, Factorum et Dictorum Memorabilium,* Leipzig, B. G. Teubner, 1865, I, 2, I.
[20]H. Butler, *The Sixth Book of the Aeneid,* Oxford, Clarendon Press, 1920, xiii.
[21]*Inferno V,* 4-11.

The part assigned to Rhadamanthus in *Aeneid VI*, 567, is given to Minos by Dante. In the *Aeneid*,[22] Rhadamanthus acts as the judge of the great sinners.[23]

In Vergil, the Styx forms the frontier of the intermediate underground region through which all pass, but in which some are kept for a time. According to tradition, a road common to all the dead conducted them to a court which determined their lot. At the crossroads of the infernal regions were seated the judges who sent to the right those who had made themselves worthy to enter the Elysian Fields; to the left those who were to be hurled into Tartarus.[24] But Minos is made by Vergil the judge at the entrance of Hades, and Rhadamanthus decides who shall be sent to Tartarus and who to Elysium. In Dante the Styx forms the boundary between the fifth circle and the city of Dis. Vergil and Dante both describe the Styx as a dark, dreary stream.

> fas obstat, tristisque palus inamabilis
> undae alligat et novies Styx interfusa coercet.[25]
> (It may not be; the gloomy pool of that unlovely wave confines them, and Styx pours her ninefold barrier between.)

> The water was far darker than perse; and we in company with the dusky waves, entered down through a strange way. This dismal little stream, when it had descended to the foot of the malign gray slopes, makes a marsh that is named Styx.[26]

Vergil has no one corresponding to Phlegyas, the boatman of lower hell. He is mentioned among the sinners of Tartarus in the *Aeneid*[27] but without specific punishment.

Phlegyas, king of the Lapithae, enraged at Apollo's seduction of his daughter, set fire to the temple of Apollo at Delphi, and was slain by his arrows.[28] Therefore, he is wrathful toward the gods in a certain sense. In Dante he seems to impersonate furor and rancor. Winds in Dante are symbols of the tempest

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[22] *Aeneid VI*, 566.
[23] Butler, xiii.
[24] Franz Cumont, *After Life in Roman Paganism*, New Haven, Yale University Press, 1922, 75.
[25] *Aeneid VI*, 438-39. Translations are from J. W. Mackail, *Aeneid* (Modern Library).
[26] *Inferno VII*, 102-8.
[27] *Aeneid VI*, 618-20.
[28] Butler, 211.

of the passions.[29] Phlegyas' function in Dante is to carry the wrathful sinners to their proper places.

The solitude suggested by the secret glades and myrtle groves of the *Sixth Aeneid* is paralleled by Canto X of the *Inferno*:

> secreti celant calles et myrtea circum silva tegit.[30]
> (Here they hide among untrodden ways, shrouded in embosoming myrtle thickets.)
>
> Now, along a solitary path between the wall of the city and the torments, my Master goes on, and I beyond his shoulders.

The Vergilian mourning fields of the martyrs of love are transformed into a region of active torment.[31]

The description of Tartarus is briefly handled by Vergil. The prelude to the description of this region is divided by Norden[32] into three parts, as follows:

(a) View of the vast prisons enclosed by a triple wall, Phlegethon's flood, the huge gate, and iron tower (vss. 548-56).

(b) The sound of groans, lashes, and the clanking of chains (vss. 557-9).

(c) Aeneas' questions about this region (vss. 560-1).

Just as the Sibyl tells Aeneas that a righteous soul never crosses the threshold of Tartarus,[33] so Vergil tells Dante that a good soul never passes that way.[34]

> tum vates sic orsa loqui: "dux inclute Teucrum, nulli fas casto sceleratum insistere limen."
> (Then the soothsayer thus began to speak: "Illustrious chief of Troy, no pure foot may tread these guilty courts.")
>
> "A good soul never passes this way."

Dante has the wall of the city of Dis girt with hideous fiends and furies.[35] Vergil and Dante both place Phlegethon

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[29]Norton, 30.
[30]*Aeneid VI*, 443-4.
[31]*Aeneid VI*, 440-44; 450-55. See *Inferno V*, 25-33.
[32]Norden, 220.
[33]*Aeneid VI*, 562-63.
[34]*Inferno III*, 5.
[35]*Inferno VIII-IX*.

in the same general location. Vergil makes it surround Tartarus, and Dante places it between the sixth and seventh circles. Both agree in describing it as a city of flame.[36] The *Inferno* of Dante follows traditional mythology in supposing that there are subterranean rivers, but he transforms the physical relation into a moral relation, by making the rivers of Hell represent the tears of this world.

In spite of the brevity of Vergil's narrative, we obtain an excellent description of Tartarus through the portrayal of the punishments inflicted there. Just as Vergil represents Tisiphone shaking her grim snakes over the guilty as she scourges them and calls her sister Furies, so Dante has girt the high tower of the city of Dis with Furies girt with green hydras and having serpents for hair.[37] Tisiphone is one of these Furies. The iron tower is mentioned by both authors.

> stat ferrea turris ad auras,
> Tisiphoneque sedens palla succincta cruenta
> vestibulum exsomnis servat noctesque diesque.[38]
> (The iron tower uprears itself, and Tisiphone sitting girt in bloodstained pall keeps sleepless watch at the entry by night and day.)

> We at last arrived within the deep ditches which encompass that disconsolate city. The walls seemed to be of iron.[39]

Vergil calls these abodes "tristis domos," and Dante refers to them as the "houses of woe."

> "an quae te fortuna fatigat,
> ut tristis sine sole domos, loca turbida adires?"[40]
> ("Or what fortune keeps thee from rest, that thou shouldst draw nigh these sad sunless dwellings, this disordered land?")
> "Who has denied to me the houses of woe?"[41]

The wailings of Hell are similarly mentioned by both writers.[42]

Vergil, without concerning himself particularly with the topography of the region, takes up the punishments inflicted there. Dante, on the other hand, not only continues to divide

[36] *Aeneid VI*, 548-51; *Inferno VIII*, 73-75.
[37] *Inferno IX*, 39.
[38] *Aeneid VI*, 555-56.
[39] *Inferno VIII*, 78.
[40] *Aeneid VI*, 532-33.
[41] *Inferno VIII*, 120.
[42] *Aeneid VI*, 557-58; *Inferno III*, 22-29.

the region into circles but subdivides each circle to make a place for each class of sinners. In the first round of the seventh circle we have the minotaur, symbol of lust, and Phlegethon, the river of boiling blood; in the second round of the seventh circle is the wood of the harpies; and in the third round is a vast expanse of burning sand. Vergil has nothing corresponding to Malebolge. This seems to have been an invention of Dante. *Bolgia* signifies literally "a budget or pouch," and *Malebolge*, "evil pouches."[43] The term is adopted by Dante as a contemptuous, picturesque metaphor for those valleys in which sinners are pouched.[44]

Dante places Cocytus at the very depths of Hades and makes it a frozen pool. The river Cocytus, although mentioned by Vergil, is not actually described. The four rivers of Dante's Hell, Acheron, Styx, Phlegethon, and Cocytus, are all connected, forming one stream. Acheron surrounds the whole shell; the Styx surrounds the last pit, the city of Dis; Phlegethon flows between the first and second rounds of the seventh circle; and Cocytus forms the very bottom of Hades. In Vergil, Acheron apparently encompasses the whole of the lower world. From the description, we might infer that there is only one river which is called either Acheron or Cocytus, but turns out to be the Styx.[45]

> Ergo inter inceptum peragunt fluvioque propinquant,
> Navita quos iam ut Stygia prospexit ab unda
> per tacitum nemus ire pedemque advertere ripae
> sic prior adgredior dictis atque increpat ultro.[46]
> (So they complete their journey's beginning, and draw nigh the river: and now the waterman descried them from the Stygian wave advancing through the silent woodland and turning their feet towards the bank, and opened on them in these words of challenge and chiding.)

Heyne[47] remarks that the poet would have found it awkward to have to describe the passage of all three, especially as the Styx is said to surround the lower world nine times.

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[43]*Cf.* Norton, 4.
[44]Norton, 4.
[45]John P. Conington, *Vergili Maronis Opera*, London, Henry Nettleship, 1884, II, 64.
[46]*Aeneid VI*, 384-87.
[47]Christian Gottlob Heyne, *Vergili Maronis Opera*, Hanover, 1816, *Excursus* 9.

fas obstat, tristisque palus inamabilis undae
alligat it novies Styx interfusa coercet.[48]

The writer believes that Conington is correct in remarking that Vergil found the notion of a single river of death most convenient for poetical purposes, but as he wished to introduce the various parts of the legends he followed, he employed the names Acheron, Cocytus, and Styx with a dim conception of Acheron emptying into Cocytus, and of the Styx as the inmost of the three, and a clear idea of Phlegethon as especially surrounding Tartarus.

The passage from Hades is very differently pictured by the two writers under consideration. Vergil makes use of the gates of ivory and of horn. The antipodal exit of Dante near the Mount of Purgatory is almost necessary for his carefully worked out scheme, for his conception of the world is essentially symmetrical and organic, and requires an exact correspondence between the intellectual, physical, and spiritual.

(b) The *Purgatorio*

Dante's Mount of Purgatory, unlike Vergil's region of Purgatory, is definitely a part of this earth. It rises by a series of terraces to a lofty height on which is the Earthly Paradise, where the souls which have been purified during their ascent of the mountain are gathered together before they drink the waters of Lethe and Eunoë.

The most elaborate of Dante's allegories is that of the Earthly Paradise. It has two parts: the first is a procession in which the books of the Bible and the virtues, pagan and Christian, accompany a chariot drawn by a griffin; the second shows in allegory the Church in the Divine Plan, with relation to the politics of Dante's time, and to political power in general. The whole is entwined with the appearance of Beatrice and her reception of her lover.[49] This is a personal episode. The allegorical veil is for a moment cast aside.

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[48] *Aeneid VI*, 438-39. See footnote 25 for translation.
[49] Allan H. Gilbert, *Dante and His Comedy*, New York University Press, 116.

Fergusson[50] finds in the meeting between Dante and Beatrice some of the qualities of modern fiction in which it endeavors to present some painful moment of human experience without understanding or perspective. This marks the most burning point of Dante's personal experience. She has come to the rescue of the lover who had forgotten her teachings.[51] She sits at the root of the tree of Knowledge.[52] The chariot is bound to the tree, which has put forth leaves and blossoms on its naked boughs.

The twenty-sixth canto of the *Inferno* suggests that Purgatory is a real place on the surface of the globe, for Ulysses in describing his last journey[53] says that he sailed out through the straits and south over the ocean for five months, till the stars of the northern hemisphere sank beneath the horizon and new stars appeared, and he sighted a mountain.

Medieval belief placed the Earthly Paradise on the top of a lofty mountain, but Dante apparently drew entirely on his imagination when he localized Purgatory on its slopes. According to medieval belief, this mountain rises as high as the lunar sphere, that is, its upper parts are above the air, in the aether of fire.[54] The Arabians, whose geographical treatises and epitomes of Greek geography Dante knew in Latin versions, spoke of a great mountain in the far South.[55] The view that this mountain, identified by the Christian schoolmen with the seat of the Earthly Paradise, is an island antipodal to Jerusalem in the middle of the Southern Ocean[56] was due entirely, it would seem, to Dante's own scientific imagination. The ideal of one church and one empire requires the geographical condition of one continuous *oikoumenē*.[57] Dante gives veri-

[50]Francis Fergusson, *Dante's Drama of the Mind,* Princeton University Press, 1953, 187.

[51]Irma Brandeis, *The Ladder of Vision: A Study of Dante's Comedy,* New York, Doubleday and Co., 1961, 116.

[52]*Purgatorio XXXII,* 87.

[53]*Inferno XXVI,* 89-142.

[54]*Cf.* Saint Thomas Aquinas, *Summa Theologiae*: Rome, Bartholomeus Zanettus, 1619, I, 102, 2.

[55]*Cf. Joachim de Lewel, Géographie du Moyen Age,* Brussels, J. Pilliet, 1852, XXXV.

[56]*Purgatorio IV,* 70.

[57]*Cf.* John A. Stewart, *The Myths of Plato,* tr. with introduction and other observations, New York, Macmillan and Co., 1905; *cf.* Carolus Zangemeister, *Orosius, Historiae Adversum Paganos,* Leipzig, B. G. Teubner, 1889, I, 2, 87- 89; VI, 22, I.

similitude to his mythology by making it explain a physical fact and by bringing this fact into clear connection with a vast system of belief already accepted. The cause which produced the island of Purgatory in the southern hemisphere simultaneously produced the *oikoumenē* of the northern hemisphere.[58] Lucifer fell on the southern hemisphere,[59] and the land which originally existed there was submerged by the shock of his fall, and this caused an equal amount of land in the northern hemisphere to bulge up above the sea, the Mount of Purgatory having been formed by the material extruded as Lucifer bored a passage down to the center of the earth by the force of his fall.[60]

Vergil evidently had in mind the doctrine which placed the abode of the blessed in the upper regions of the air, but seems to have transferred it to the lower world. The *Aeneid* gives the impression that the heavenly spheres are reached by going underground. Vergil seems to have confused two contradictory conceptions but skillfully makes them coalesce. In spite of the fact that Aeneas and the Sibyl have been journeying underground, the plain in which souls about to be born again are gathered near the banks of Lethe has its own sun, and the air is freerer and purer.

> largior hic campos aether it lumine vestit
> purpureo, solemque suum, sua sidera norunt.[61]
> (Here an ampler air clothes the meadows in lustrous sheen,
> and they know their own sun and a starlight of their own.)

Also the following passage conveys the same notion.

> sic tota passim regione vagantur
> aeris in campis latis atque omnia lustrant.[62]
> (Thus they wander up and down over the whole region of
> broad vaporous plains, and scan all the scene.)

The only indication of Purgatory that we have in the *Aeneid* is in connection with the grove of Lethe,[63] where Purgatory is not clearly separated from Elysium. We assume, however, that

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[58]*Cf.* Stewart, 25.
[59]*Inferno, XXXIV,* 106-18.
[60]Stewart, 105.
[61]*Aeneid VI,* 640-41.
[62]*Aeneid VI,* 886-87.
[63]*Aeneid VI,* 679-887.

the pious souls pass to the Elysian Fields where they dwell forever, but if they have not reached the goal of perfection, they must return to earth to reincarnate themselves in new bodies after they have drunk of Lethe and lost the memory of their previous existence. Dante evidently uses the slight suggestion of Vergil and works out an elaborate system of purification with various stages and steps. It was his idea to lift Purgatory to the earth's surface, place it far from Hell, next to the Garden of Eden, and surround it with an atmosphere of light and hope.[64]

In a philosophical sense, the act of turning away from sin and turning toward light is *conversio,* as Dante and the theology of his time understood that term. Singleton[65] compares it to the journey of Moses leading his people from Egypt. Certain symbolic images such as the sun, the stars, the abyss, and the mountain lie at the foundation of Dante's poem. The natural light of the *Purgatorio* where every hue and angle of the sun from dawn to setting is recorded with precision and delight is in direct contrast to the terrible dark-light of the *Inferno.* These images are not mere embellishments in Dante. Physical light is the natural link between the two extreme terms of the symbolic journey: man in the darkness and ignorance of error, desiring vision, and God whose being is absolute light.[66]

Another tradition, probably as old as thought, gave the metaphysical identification of light with truth. Into the universe, the sun sheds light, warmth, and energy corresponding to the wisdom, love, and power of God. Of these gifts, light is the supreme one for man in the sense that divine light streaming through Purgatory opens the way for love and understanding.[67] Dante's whole journey is penetrated by metaphors of light, describing every act of understanding as one of clearer vision of truth in terms of illumination.[68]

In the earlier cantos of the *Purgatorio* the souls ask for remembrance in prayer that their delay may be shortened, just

[64]Grandgent, xxv.
[65]Charles S. Singleton, "In Exitu Israel de Aegypto" in *Dante: A Collection of Critical Essays,* ed. by John Freccero, Englewood Cliffs, New Jersey, Prentice-Hall, 1965, 102.
[66]Brandeis, 168.
[67]Brandeis, 186.
[68]Brandeis, 192.

as Palinurus in the sixth book of the *Aeneid*[69] implores Aeneas to release him from his woes either by throwing some earth upon him or by taking him with him over the Stygian waves that he may rest in peaceful retreats.

The Vergilian picture of the Elysian Fields probably suggested to Dante the conception of the charming, peaceful spot in the Valley of the Princes.

> His demum exactis, perfecto munere divae,
> devenere locos laetos et amoena virecta
> fortunatorum nemorum sedesque beatas.
> largior hic campos aether et lumine vestit
> purpureo, solemque suum, sua sidera norunt.
> pars in gramineis exercent membra palaestris,
> contendunt ludo et fulva luctantur harena;
> pars pedibus plaudunt choreas et carmina discunt.[70]
> (Now at length, this fully done, and the service of the goddess perfected, they came to the happy place, the green pleasances and blissful seats of the Fortunate Woodlands. Here an ampler air clothes the meadows in lustrous sheen, and they know their own sun and a starlight of their own. Some exercise their limbs in tournament on the greensward, contend in games, and wrestle on the yellow sand. Some dance with beating football and lips that sing.)

> Now steep, now level was a winding path that led us to a side of the dale, where its border more than half dies away. Gold and fine silver, and cochineal and pure white, Indian wood bright and clear blue, fresh emerald at the instant it is split, would each be vanquished in color by the herbage and by the flowers set within that valley, as by its greater the less is vanquished. Nature had not only painted there, but of sweetness of a thousand odors she made there one unknown and blended fragrance.[71]

As Anchises leads the Sibyl and Aeneas to a height,

> Dixerat Anchises natumque unaque Sibyllam
> conventus trahit in medios turbamque sonantemque,
> et tumulum capit unde omnis longo ordine posset
> adversos legere et venientum discere vultus.[72]
> (Anchises ceased, and leads his son and the Sibyl likewise amid the assembled murmurous throng, and mounts a

[69] *Aeneid VI*, 36; 372.
[70] *Aeneid VI*, 637-44.
[71] *Purgatorio VII*, 70-81.
[72] *Aeneid VI*, 752-55.

> hilllock whence he might scan all the long ranks and learn their countenances as they came.)

so Sordello shows the dell to Vergil and Dante from a bank.

> From this bank ye will better discern the acts and countenances of each and all, than when received among them on the level below.[73]

In both poems the spirits are seen reclining together on the greensward and singing.

> conspicit, ecce, alios dextra laevaque per herbam
> vescentis laetumque choro paeana canentis
> inter odoratum lauri nemus, unde superne
> plurimus Eridani per silvam volvitur amnis.[74]
> (Others, lo! he beholds feasting on the sward to right and left, and singing in chorus the glad Paean-cry, within a scented laurel-grove whence Eridanus river surges upward full-volumed through the wood.)

> Here I saw souls who, because of the valley, were not visible from without, seated upon the green and upon the flowers, singing "salve Regina."[75]

Like Anchises, Sordello surveys and recognizes souls destined to rise.

Dante is true to mythology in placing Lethe near Elysium or the Earthly Paradise, and making it a stream on the surface of this earth. The twin streams, Lethe and Eunoë, have no parallel in the *Aeneid*. Lethe girds the Earthly Paradise on the side of the earth, Eunoë on the side of heaven.[76] As the Lethe of the *Aeneid*[77] is evidently in the same region as Elysium, so Purgatory in the *Divine Comedy* is placed close to the Earthly Paradise or Elysium. The common mythology gives Lethe alone. It is possible that Dante had heard of the twin streams, Lethe and Mnemosyne of the Orphic cult, indirectly through the medieval mystics. But it seems better to suppose that the natural picture of a stream of memory beside the stream of forgetfulness occurred to him spontaneously. Dante places these two streams side by side on the top of the Mountain of

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[73]*Purgatorio VII*, 88-90.
[74]*Aeneid VI*, 656-59.
[75]*Purgatorio VII*, 82-85.
[76]Stewart, 15.
[77]*Aeneid VI*, 703.

Purgatory. Dante, not having to set forth his doctrine of purification in the form of a myth of metempsychosis, makes the purified soul before it passes from the Mount of Purgatory up to heaven drink once of Lethe at the completion of its purgatorial stages in order that it may forget its sins, and then of Eunoë that it may retain the memory of its meritorious deeds.[78] Dante tells us that when a soul passes to a higher terrace in the course of purification, the Mount of Purgatory is shaken and there is a great shout of the spirits praising God. This finds no parallel in Vergil but rather in the myth of Er,[79] where thunder and an earthquake are associated with a new birth.

In regard to the name Eunoë, Stewart [80] thinks that Dante's use of the name may have some connection with the idea of "refrigerium" which found its way into Christian literature[81] and Christian epitaphs,[82] and indicates that a boon was graciously bestowed by God through the waters of this stream — the boon of "refrigerium."[83] Dante's Eunoë would thus mean the stream of the loving kindness and grace of God.[84] Miss Harrison[85] states that we shall probably find the immediate source of Dante's Eunoë in Christian epitaphs. Grandgent[86] thinks that Dante constructed the name Eunoë for himself out of the Greek *eunoi* or directly from *eu* ("well") and *nous* or *noos* ("mind").

As a character in the *Divine Comedy,* Vergil assumes a dual role, that of guide through the region of shades and revealer of wisdom as Dante progresses along his path. Fergusson[87] suggests that Dante the Pilgrim resembles one of Henry James's central intelligences, visible himself as a particular individual, yet revealing to the reader both the story and its meaning as he learns it.

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[78]*Purgatorio XXVIII,* 130.
[79]Stewart, 151.
[80]Stewart, 161.
[81]Oehler, *Tertullian, Apologeticus*, Cambridge University Press, 1917, 39.
[82]Albrecht Dieterich, *Nekuia*, Leipzig, B. G. Teubner, 1893, 95.
[83]Stewart, 161.
[84]Stewart, 161.
[85]Jane Ellen Harrison, *Prolegomena to the Study of Greek Religion*, Cambridge University Press, 1903, 579.
[86]Grandgent, 58; 239.
[87]Fergusson, 10.

The purpose of having Aeneas go to the underworld is to regenerate him, to make him a new man, as it were. It is a picture of toil and peril crowned by triumph. It has the same general meaning as the visions of Dante. Since the goal of Dante's thoughts is the discovery of truth by means of philosophical and theological speculation, he is ready to find allegories in the ancient authors. While Dante has taken from Vergil the main idea of his journey among the dead, he has altered it in matters of detail to suit his own views and the exigencies of Christian tradition. The idea of the world as a theophany was not new when Dante wrote.[88] Of the journey of Aeneas to the shades, he has adopted what he considers the fundamental idea, while of the merely formal and fanciful points, he has taken some and omitted and altered others.[89] From the sixth book of the *Aeneid* have come expressions which show the marks of their origin in spite of Dante's free and artistic treatment of them. Wherever he models both fact and thought, we not infrequently feel in the turn of a phrase, in the coloring of a picture, in the quality of a comparison, the skillfully handled influence of the great art of the classic writers.[90] In the great writings of pagan times, he found a source of endless delight, and he did not hestitate to put them on a par with his Christian authorities.

In the Dantesque conception we see the Christian ideas grafted upon the old stories and upon the geographical peculiarities of the Latin Avernus.[91] The *Divine Comedy* is a combination of pagan and Christian motives. Dante's Hell is full of Vergilian names with Christian and pagan figures commingled. Their changed character may be due to the fact that in Dante's day the gods of classic mythology were regarded as demons or fallen angels who had seduced mankind to worship them.[92]

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[88]Brandeis, 15-16. Dante may have encountered this doctrine in certain works of the Arabian Sufi poets. He saw it forecast in Thomas Aquinas' doctrine that the ideas of all things existed in the mind of God in anticipation of the Creation and were by His Will made manifest.

[89]Domenico Comparetti, *Vergil in the Middle Ages*, tr. by E. F. M. Benecke, London, S. Sonnenschein, 1895, 21.

[90]Flamini, 105.

[91]Flamini, 38.

[92]Grandgent, xxvi.

Dante interprets the topographical aspects of the Nether World in the light of the medieval schoolman.

The numerous visions of the lower world which had been invented for many centuries treated of a region in which Hell and Purgatory lay side by side. The machinery of Dante's Hell is more or less that of medieval tradition in which most of the conventional aspects are retained. Dante has introduced an innovation, however, by making the rivers of the lower world represent evil passions. Acheron symbolizes the passions of the concupiscent; the Styx, the passions of the irascible; Phlegethon, bestial passions; the ice of Cocytus, the inertia of the sensuous appetite.[93] Although the city of Dis is the medieval counterpart of the Vergilian Tartarus, it is otherwise with Purgatory. Dante's Mount of Purgation, where, in the glory of the sun and stars, man purges away the dross of the world until he recovers his moral and intellectual liberty is more truly an original idea, although the suggestion may be, and probably is, Vergilian.

Vergil delights in the general picture; Dante prefers the precise designation of places and people. Although we cannot doubt that the study of the imperial poet of *alma Roma* greatly influenced Dante just as the civilization and thought of the Latin race has never ceased to have a powerful influence on the minds and customs of men, yet we must assign to medieval philosophy a part of the encyclopedic learning with which Dante's poem abounds.

[93]Flamini, 72.

ABSTRACTS OF MASTERS' THESES

THE EFFECT OF SPECIALLY PLANNED PRESCHOOL EXPERIENCES ON THE ACHIEVEMENT OF THE CULTURALLY DEPRIVED CHILD IN THE LANGUAGE ARTS PROGRAM OF THE FIRST GRADE

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(Madison College, 1966)

Many of the culturally deprived students entering first grade do not seem desirous or able to adjust to the behavior or learning patterns expected by the public schools. Because of their limited background of experience, school activities have little meaning for them. It was felt that these children, if provided with the right kind of carefully planned activities before starting the regular school program, might adjust to the present school program and attain to adequate growth. This study was undertaken in Fairfax County to investigate the effects of carefully planned preschool activities on the ability of the culturally deprived child to achieve success in the basic curriculum of the language arts program during the first grade of school.

Three groups of children were used in the study.

Group A. The experimental group was composed of culturally deprived children who were placed in a pilot program of kindergarten.

Group B. The control group was composed of culturally deprived children who began first grade without any previous school experience.

Group C. This group was composed of children from a middle class suburban environment and had had a wide experiential background.

The study was consisted of two parts.

Part I was a study of the growth in reading readiness of Group A as shown by the results of the Metropolitan Reading

Readiness Test. This test (two different batteries) was administered to this group in February, 1965, and again in June, 1965. In addition to the test results, changes in attitude and behavior recorded in narrative reports of the teacher and direct observation were used to denote growth of individuals. In September, 1965, all three groups used in the study were given the Metropolitan Reading Readiness Test. Scores of the three groups were compared.

Part II was a study and comparison of the achievement of all three groups as indicated by the amount of work completed, quality of the work done as indicated by objective reading test scores, report cards, narrative evaluations, and comparisons of samples of work done by each of the three groups.

The results of the study indicated that the specially planned activities of the kindergarten program did help to promote growth in readiness of the culturally deprived child for the academic work of the first grade in the language arts area; that the culturally deprived child who had the kindergarten experience was more successful in the program of the first year in public school than those who had not had this experience; and that the culturally deprived child who had been given a year of many and varied experiences before starting public school was better able to compete with the middle class child in a school situation.

Further study concerning "long range effect" of this program should be made with these groups. Results of the work done with the groups studied should be used in planning the continuance of the language development and enrichment program for these culturally deprived children.

A STUDY OF THE EFFECTS OF THIOURACIL ON THE RATE OF DEVELOPMENT OF *AEDES AEGYPTI* LARVAE

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A somewhat uncertain state of affairs has prevailed in the field of comparative endocrinology since its beginning about 70 years ago. Numerous investigations have been undertaken to determine the effect of vertebrate hormones upon invertebrates, and they have produced about as many negative reports as positive. While some areas have been explored extensively, others have been neglected. The effect of thyroid and anti-thyroid substances upon mosquitoes in particular must be listed among the latter.

Two factors make *Aedes aegypti* a logical choice in an investigation of this type. First, considerable knowledge has been accumulated concerning the anatomy and physiology of this species. (The role of the adult female in transmitting the yellow fever virus is primarily responsible for this.) Second, the genus lends itself well to laboratory rearing since the eggs may be collected and stored on strips of filter paper.

In this study larvae were hatched in experimental solutions of thiouracil which ranged in concentration from 10^{-4} to 10^{-8} Molar. Since phenylalanine is essential to normal development of mosquito larvae, solutions of 10^{-4} to 10^{-5} Molar were also administered. It was felt that these solutions would be useful as a comparison in the event that the thiouracil was merely consumed as food.

Subsequent observation of the time required for the larvae to achieve pupation revealed no significant difference in the time required by those in the experimental solutions as compared to those in distilled water which served as the control medium.

If the assumption that thiouracil reached the tissues intact is accepted, then it must be concluded that it has no effect

upon *Aedes aegypti* larvae. This, however, would be unfounded since there are several factors which might have prevented its absorption. (1) Larvae swallow little water. (2) The exoskeleton of mosquito larvae has been shown to be relatively impermeable to water and substances in solution. (3) Thiouracil entering the digestive tract absorbed on food may have been hydrolyzed into a form which, if absorbed, would have no effect. (4) The thiouracil may have been passed from the body without being absorbed.

In view of these uncertainties it is felt that this problem warrants further investigation through the use of radioactive tracers to establish the entrance of thiouracil under the conditions of this investigation. Failing this, the tracer technique could be employed to determine a better method of administering the thiouracil.

PREDICTING COLLEGE GRADES THROUGH A COMBINATION OF OBJECTIVE TEST SCORES AND HIGH SCHOOL GRADES

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(Madison College, 1966)

The purpose of the thesis, Predicting College Grades Through a Combination of Objective Test Scores and High School Grades, was to learn something about the academic success or failure of students admitted to Madison College, and to determine the best combination of predictors that can be used in predicting a student's academic performance.

The problem was divided into four parts (1) to develop a prediction equation based on a formula that relates obtained freshman grades to College Board Scholastic Aptitude Test Scores and high school records; (2) to see if it is possible to differentiate between those borderline inadmissible students who will succeed and those who will not succeed if permitted

to enter on our summer school probation plan; (3) to determine the continuing success of students admitted to the regular session after a summer on summer school probation; and (4) to compare a student's average at the end of his first semester in college and at the time of his graduation.

The prediction formula was worked out according to the recommendations published by the College Entrance Examination Board and involved the combination of these predictors: high school record (past performance), SAT-verbal score (the ability to read and reason), and SAT-mathematical score (the ability to solve problems). Allowance was made for the accuracy of each predictor by weighing it according to its contribution to the first semester grade-point average (subsequent freshman performance of students who were admitted to the College in 1964). The entire entering class consisting of 659 members was used in an effort to make the results more stable.

After the data were assembled and high school averages on academic subjects had been converted to a common basis, the information was key-punched into IBM cards. With the help of Mr. R. Reynard, Data Processing Representative, the study was programmed and run on the computer at Space Conditioning Incorporated. This information, (sums, squared values, and products), was used to compute:

1. Correlations between —
   a. Verbal scores and high school averages
   b. Mathematical scores and high school averages
   c. Verbal scores and mathematical scores
   d. Verbal scores and freshmen grade-point averages
   e. Mathematical scores and freshmen grade-point averages
   f. High school averages on academic subjects and freshmen grade-point averages

2. Means for each variable —
   a. Verbal
   b. Mathematical

c. High School average
d. Freshman grade-point average

3. Standard Deviations for each variable —

a. Verbal
b. Mathematical
c. High school average
d. Freshman grade-point average

The predictor weights and the multiple correlation coefficient were determined. The predicted freshman grade-point average equation was worked out. However, at the suggestion of a member of the author's Graduate Advisory Committee, another look was taken at the equation and two equations, one for women only and one for men only, were worked out. The results were quite different.

Part 2 of the study involved applying the prediction formulas to the students who were admitted on summer school probation in the summer of 1964. The students (130) completing the summer session were divided into two groups, the unsuccessful and the successful; and a comparison made between the two groups.

Continuing success of the fifty-five students admitted to regular session after a summer on summer school probation was noted in a table giving their averages for first and second semesters of 1964-65. Attention was given to the number who had to attend summer school 1965 in order to be eligible for re-admission in September. In the fall of 1965, 73.2% of the fifty-five students (31.3% of the original group) who qualified were still in school and 15.3% had a "C" average.

In order to compare a student's average at the time of his graduation with his average at the end of his first semester at Madison College, an IBM card was made up for each member of the graduating class of 1965. Into this card, the following information was key punched:

a. Average at time of graduation
b. College quartile rank

c. Average at end of the first semester
d. High school quartile rank, if available

The cards for graduating transfer students were discarded and the other cards were sorted from highest to lowest and divided into quartiles. A count was made to see how many students had improved their averages. It was noted that only one member of the graduating class had an average of 1.00 or below at the end of the first semester. Going back to the records of January 1962, nineteen students with averages of 1.00 or less were found to be members of this group. The other eighteen students attended college for a total of forty-five semesters and fifteen summer schools and none of them had the required average necessary for re-admission at the time of their withdrawals. Most were academically dismissed by the College.

The conclusions should be viewed with caution because they are based on only one class. According to the data on which this report is based, the following proportional contribution of each predictor is as follows:

	Men	Women
Verbal score contribution	62.8%	30.0%
Mathematical score contribution	13.4%	12.1%
High school average	23.8%	57.9%

The prediction equations as worked out are:

Men: $.34(V) + .09(M) + .21(H) - .53 =$ predicted freshman grade average

Women: $.21(V) + .09(M) + .57(H) - .85 =$ predicted freshman grade average

There is a considerable amount of difference in the weight to be given predictors when the group is divided according to sex. The relationship between men students' high school grades and college grades are much lower than that of women. The best single predictor for success of women students at Madison College is the high school average. This is in agreement with the conclusion arrived at by Joseph Paul Giusti, Assistant to the Vice President for Resident Instruction, The Pennsylvania State University, in his study of the findings

of investigations made over the past thirty years to determine the relationship between high school average and college grade average. He says, "The most significant conclusion resulting from the exploration of the field of prediction studies is the unquestionable superiority and stability of the high school grade average as a single source of data for predicting college success."[1]

It would seem that the prediction formulas are of questionable value in determining the success of individual summer school probation students. Many students achieved significantly higher grades than their predicted averages. While grades were on the high side for the successful group, they nearly always fell within the standard error of estimate; and the earned mean for the total entering group is very near the predicted mean. The prediction formulas would make it possible to establish a cut-off point. Only one student with a predicted average of less than 1.30 was successful in gaining admission and she was unable to make the required average for re-admission to her second year.

Fifty-five students were successful in making the required 2.00 average for admission in September. In studying their records, it was noted that only 31.5% of this group were able to earn a "C" average first semester. First semester averages were much nearer the predicted averages than the summer school averages had been. By the end of the session, twenty-one students had failed to qualify for re-admission and five had withdrawn. While some of the students admitted under this arrangement will graduate, it would certainly appear that the odds seem to be against eventual college success.

In comparing first semester grade-point averages of the entering class of 1964 with their high school averages on academic subjects, it was noted that most students' college averages were lower. However, 23.5% of the men and 16.2% of the women had higher averages. In looking at the graduating class of 1965, it was found that 74.9% of the graduating class had higher averages than they had at the end of their

[1]Joseph Paul Giusti, "High School Average as a Predictor of College Success: A Survey of the Literature," *College and University,* Volume 39, Number 2 (Winter, 1964), p. 207.

first semester. Most of the students who failed to maintain or increase their first semester averages were graduated in the first or second quartile of their class. They made good grades all of the time, but failed to maintain as high an average as they had at the end of their first semester.

If increased enrollments make it necessary for students to come to summer school, drop out first semester because of lack of dormitory space, and wait for re-admission to second semester, it might be worth-while to check other classes to see what happens to students with very low averages at the end of their first semester. If the graduating class of 1965 is typical, students with a rating of 1.00 or less could be dropped at the end of the first semester: it does not seem that very many will be able to stay and graduate.

CHARLES FENTON MERCER, 1778–1858

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This study of "Charles Fenton Mercer, 1778-1858," has been the result of several contributing factors and events. During the consideration of a topic for research it was suggested that a concise record of Mercer's contributions to the history of Virginia and to the history of this nation should be readily available. Local historians also expressed a desire to keep alive the memory of one of Loudoun County's favorite sons for whom a magisterial district was named. Finally, the author has long considered the research paper to be a necessary and vital part of a graduate program. To this end this paper attempts, in some small measure, to bring together for future reference the facts in the life of Charles Fenton Mercer.

Like those students who by intent or by accident stress biased tendencies toward their subject, the author has been tempted by similar inclinations in this biography. Nevertheless, the objectivity which is attempted in this paper is in-

tended to illuminate the virtues of this man rather than to simply project his dominant traits. In doing so the reward has been abundant, for it has strengthened a conviction that the primary purpose of this study has been made more meaningful and purposeful through intensive study and research.

Mercer was born into and reared in an atmosphere of the Virginia gentry. His earliest associations in childhood were strengthened by Christian influence and training. Those qualities formed the basis of his labors as a philanthropist in later years principally as an advocate, a leader, and an untiring contributor to Liberian colonization. He began a highly successful practice of law in Loudoun County at the age of twenty-six. His election to the House of Delegates in 1810, representing Loudoun and Fauquier counties, marked the beginning of nearly thirty years as a lawmaker in state and national governments. While a member of the Virginia General Assembly, Mercer devoted much of his energies toward internal improvements and a sound banking system. He contributed generously to legislative reforms while serving on committees in both of these areas. During his final year as a member of the House of Delegates he proposed a system of free public schools in Virginia. His education bill, after passing the House by a comfortable margin, was lost in the Senate by one vote.

Mercer's election to the House of Representatives was practically the only illumination provided by the Federalists against "republicanization" in Virginia in the election of 1817. Even though he did not consider himself a one-party representative, the Loudoun Congressman remained a Federalist, and late in his political career he became associated with the Whig party. He desired to see a stronger central government, but he was unsympathetic with the Jackson administration, for he was concerned over the growing influence of executive power.

Throughout his legislative career Mercer championed the movement for internal improvements, and was an associate of those who led the expansion movement westward. Although a native of Virginia's Tidewater area he was a leader of the forces advocating waterway and turnpike construction to the Ohio River and to the West. He became the first president

of the Chesapeake and Ohio Canal Company and was largely responsible for instituting and for directing the progress of that waterway until his removal from that office four years later. Even following his removal as president of the company, Mercer continued to devote his efforts to the completion of this favored project.

Upon his resignation from Congress in 1839, Mercer's activities became more varied and he traveled extensively. He moved from Virginia to Tallahassee, Florida, and became cashier of a bank. Five years later he promoted a settlement in Texas called the Mercer Colony. This venture proved disappointing, and he moved to Kentucky and built a home near Carrollton. After two years he again became dissatisfied and sailed to Europe as a proponent for the colonization of American Negroes in Africa. Thereupon, Charles Fenton Mercer embarked upon the final phase of his life's work of devoting his energies to the freeing of a portion of the population of his state and nation from the bonds of slavery. During the remaining years of his lifetime, until his death in 1858, Mercer traveled throughout much of Europe and America crusading against slavery which he considered "the blackest of all blots and the foulest of all deformities."

An indispensible source of information pertaining to Mercer's political activity in the General Assembly is available in the *Journal of the House of Delegates,* 1810 through 1817, and in the *Richmond Enquirer.* Similarly, and more extensively, the *Annals of Congress,* the *Register of Debates in Congress,* and the *Congressional Globe* relate his varied contributions while a member of the House of Representatives from 1817 until 1839. Numerous speeches which were presented by Mercer may be found in the Library of Congress, Rare Book Division, and in the McGregor Library, The University of Virginia. Mercer correspondence is available, principally at the Virginia State Library, Archives Division, and at the Library of Congress, Manuscript Division. James Mercer Garnett's *Biographical Sketch of Hon. Charles Fenton Mercer, 1778-1858,* was used for reference on numerous occasions. An unpublished Master's Thesis (University of Chicago), "Charles Fenton Mercer," by Wayland Fuller Dunaway, stresses Mercer's interest in the Chesapeake and Ohio Canal.

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